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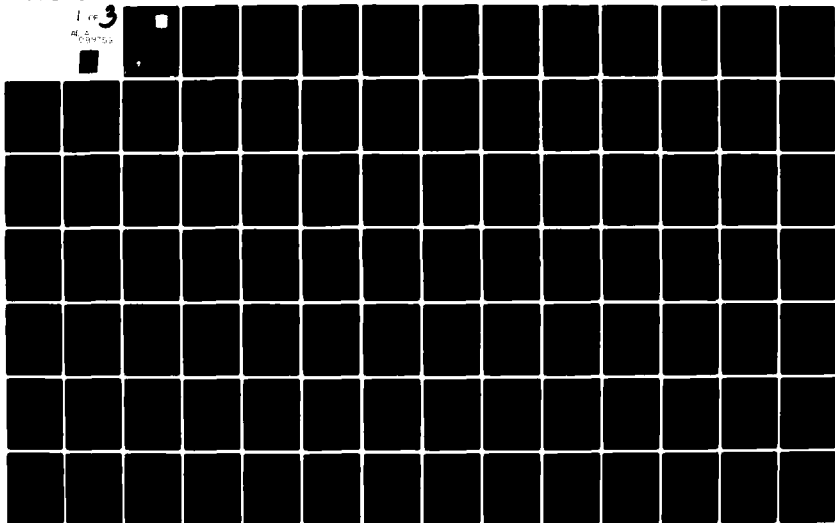
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JUN 80 P W HANDLEY, A KAREMAA, R A ROBERGE

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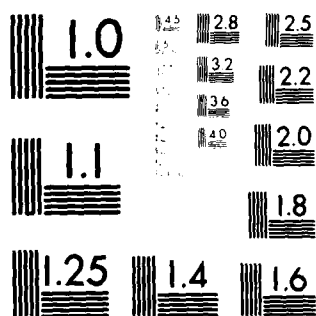
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NINE DAYS TO ODER AN ALTERNATE NATO STRATEGY FOR CENTRAL REGION, EUROPE

by

Colonel Philip W. Handley, USAF
Lieutenant Colonel Aadu Karemaa, AR

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NINE DAYS TO ODER;

AN ALTERNATE NATO STRATEGY FOR
CENTRAL REGION, EUROPE.

A GROUP STUDY PROJECT

9
10 by

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11 JUN 11 80
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US Army War College
Carlisle Barracks, Pennsylvania 17013
June 1980

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ABSTRACT

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Aadu Karemaa, LTC, AR Study Adviser

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PREFACE

This Group Study Project was produced under the guidance of the US Army War College, Department of Military Strategy, Plans and Operations. The study objective, scope and methodology was developed by the authors, both of the Class of 1980. In addition, valuable guidance and suggestions were furnished by Colonel Ronald A. Roberge, the study adviser, and by Colonel Randall A. Greenwalt, especially in the area of Pact forces, operations and tactics. LTC Donald Festa reviewed the amphibious concept of operations and offered numerous and highly appropriate insights and recommendations. Commander Isidore Larguier, Jr. was consulted on Naval matters, and Mr. Robert D. Collins advised regarding the political implications of operating in neutral Austria. Colonel Raymond M. Macedonia reviewed the initial concept of ground operations and was a source of encouragement and enthusiasm. In addition, a large number of Air Force personnel in the Pentagon contributed reference materials, data, and suggestions that were instrumental in the formulation of the air campaign plans.

To all these colleagues in the profession of arms, the authors offer their thanks.

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CHAPTER I

INTRODUCTION

The Russian state that was established by the merging of the states of Kiev and Novgorod¹ about one thousand years ago exhibited aggressive and imperialist tendencies from the day of its conception. Its expansionist policies peaked under the Czars during the nineteenth century and were only temporarily interrupted by the Communist Revolution. Now, at the approach of the twenty-first century, the Russian Empire is ready to burst into the Indian Ocean, the Persian Gulf, the Mediterranean, and to capture the remaining half of the highly industrialized Europe. If Russia ever stood close to achieving what it considers to be its preordained destiny: the domination of the modern world, then it must be doing so during the current decade.

Wars are the instruments of nations. They can be used to gain or to protect strategic objectives. Judging by the military camp atmosphere prevailing in the contemporary Soviet Union, the option of war must undoubtedly look attractive to the ruling elite. While its rulers might be well prepared to achieve their objectives by war, the western world is also ready to defend their way of life by violence, if necessary. The question is not if the west should use their armaments to protect their interests, but how.

This study examines some possibilities and then selects and develops one specific approach. As will become obvious to the reader, this operational strategy is only one of a number of possibilities, some possible inferior but others undoubtedly superior, to the selected concept.

One fundamental rule of the study was to use as much as possible of the existing NATO/US military might and to identify shortages only where

absolutely necessary. However, no attempt was made to use or adopt the existing NATO strategy. Consequently the concepts embodied in MC14/3 and the forward strategy were rejected or ignored. Instead, the study was guided by the following fundamentals:

1. The purpose of firepower is to achieve mobility.
2. The purpose of mobility is to shift the center of gravity of the enemy.²
3. The purpose of shifting the center of gravity is to frustrate the plans of the enemy and to force him to conform to your plans.
4. The purpose of frustrating the plans of the enemy is to deny him his strategic objectives and to achieve your objectives.
5. The purpose of gaining your strategic objectives is to achieve peace that embodies a new balance of power that in turn is in greater harmony with long range national strategy.

Finally, this study is dedicated to Sun Tzu, who in 500 B.C., stated that the "supreme excellence consists of breaking the will of the enemy's resistance without fighting." While we have not achieved that ultimate level of excellence, we have developed a concept that involves the breaking of the enemy's resistance with the expenditure of minimum effort, resources, and time.³

CHAPTER I

FOOTNOTES

1. R. Ernest Dupuy and Trevor N. Dupuy, The Encyclopedia of Military History, p. 261.
2. Basil Liddell Hart, The Sword and the Pen, p. 319.
3. Ibid., p. 318.

CHAPTER II

SOVIET STRATEGY AND PACT SCENARIO

The written history of the Russian nation is dominated by two recurring themes: the defense of her borders against invasions, and the insatiable drive to achieve great power status and hegemony on the Eurasian land mass. The conquests of the Second World War have brought a large degree of security to Russia proper. As a result, no aggressive acts have been committed against her territory for the last thirty-five years.

After 1917 and concurrently with her drive for territorial security, the Russian nation sought to achieve world domination through the spread of Communism. How this was to be achieved through the revolution of the world proletariat is well known, and we need not dwell on the subject here. By the late 1940s, it had become obvious even to the most devout Marxist that the revolution of the world proletariat was not to be. New avenues for the achievement of world domination were to be developed. It must not have escaped the Soviet leadership that the position of the United States in the world rested mainly on its economic power, its nuclear arsenal, and its Allies. The new Russian strategy was consequently based on surpassing us in the areas of nuclear weapons and economic output. Furthermore, our global spheres of influence were to be weakened by the Soviet endorsement of wars of liberation and insurgencies.

By the late 1970s, the Soviets had been able to succeed only in one area. They were able to match us in the military category. They also have met some success in extending their areas of global influence, especially in Vietnam and around the horn of Africa. However, it must be painfully

obvious even to the most optimistic communists that their brand of economy has some built-in self-inhibitors that permit it to function at only about 50% of its potential, as compared to the capitalist systems. No longer do we hear high level boasts about surpassing the US in economic production.

For the purpose of this study, it is assumed that the Soviet Union has abandoned the substance of its original plan for replacing the US as the world leader, but has not abandoned the aim. While the economic factor has been downgraded, the center of gravity has shifted to the dismemberment of the foundations of the US global position.

In the view of the Soviet national leadership, our position rests on the economic power of the continental US, the West European community, and Japan/Korea. In addition, it is backed up by the military potential of the US and European nations. The Soviets have decided, that should they be able to achieve control of either Japan or Europe, our current position of world leadership would collapse. Of the two, they have selected Western Europe as the first candidate for Soviet control and domination.

In keeping with the Soviet strategy, they will continue to fish in troubled waters and to exploit low risk situations. In the early 1980s, the Soviets will continue to wait for a window of opportunity. This could be a major economic crisis in the US (20-40% inflation coupled with a serious recession) or a major political power struggle or vacuum on the presidential level. At this point they will precipitate first a diversionary attack by surrogates, such as North Korea, and then launch a conventional limited attack in Europe, in order to eradicate once and for all the 'pervasive German menace to the Soviet security'.

The United States will receive about 90 days of strategic warning regarding the impending invasion. Because of domestic and leadership

crises or vascillations, this warning translates into a five day tactical warning. Consequently the Warsaw Pact forces attack with three fronts on 4 July 1983 with forces in place at that time, and across the East German and Czechoslovakian borders. The fourth and fifth front elements from the Baltic, Byelorussia, Carpathia, Kiev, Leningrad, and Moscow military districts will arrive in East Germany during the period of D+3 to D+8, but not later than D+14.

The Soviets clearly announce that their attack in FRG has the limited objective of destroying Germany, and they adhere to their pronouncements not to use nuclear, chemical, or biological weapons. The Russian unannounced military objectives also include Denmark, the Netherlands, and Belgium. These limited military conquests are expected to produce the initial "Finlandization" of Norway, Sweden, France, and Italy, and consequently the overall achievement of their major long range national objectives. The European Economic Community will consequently become a dominant influence in the Middle East and to deny oil for Japan. The decrease of Japanese economy would further weaken our position in the world, and the Soviet leaders would hope, relegate the United States to a second rate power.

CHAPTER III

THE DEVELOPMENT OF ALTERNATE STRATEGY

Military strategy must, as always, support national strategy. When we talk in terms of alternate military strategies, we are not concerned with modifying national strategy, only with the use of the military resources in a different way to help achieve the same objectives. At the same time, these objectives must be achieved at the lower risk, at a lower cost or possibly both.

In this day and age of deterrence, we have lowered military art to the level of counting artillery tubes, airplanes, tanks and rockets. It is the intent of this study to bring out the fact that deterrence and the ability to win on the battlefield is a combination of force ratios, tactics, geographical and other strengths and vulnerabilities. When we ascend from the level of force ratio deterrence to levels of military strategy that use our naval, air, Marine Corps and Army resources in a synergistic manner, much higher levels of military power can be generated. One objective of this study is clearly to seek a higher plane in our military strategic thinking and planning.

THE STRATEGIC CONCEPT

The current United States nuclear strategy is based on the fundamental assumption that the Soviets will launch an attack on the United States, that we will absorb the attack and then will have sufficient forces left in the arsenal of the nuclear triad to inflict unacceptable damage to the Soviet counterforce and countervalue targets. This

capability to retaliate with sufficient force and to cause unacceptable damage to the enemy constitutes our nuclear deterrence.

At the same time, our current NATO strategy does not incorporate any deterrence on the conventional warfare level. If the Pact should attack, at the "worst case" they will be held or pushed back to the existing East German border. In other words, if they attack, they have nothing to lose and everything to gain. To compensate for this lack of credible conventional deterrence, our NATO strategy is linked to the nuclear retaliation.

Over the past decades the nuclear threshold in the European theater has tended to creep to such high levels that the credibility of the nuclear linkage has become highly suspect. The decisions to deploy ground launched cruise missiles and Pershing II missiles in Europe reflects an effort to lower the nuclear threshold in Europe and to re-establish credible deterrence through a lower level nuclear linkage.

The nuclear linkage in the NATO environment represents a highly uncomfortable political and military situation. The current attempts to lower the nuclear threshold on the NATO sides can only be temporary and marginally effective. A deterrence concept not dependent on the nuclear linkage would represent a situation more acceptable from the political point of view also more credible from the military standpoint.

The purpose of this study is consequently to determine if it is possible to establish a level of credible deterrence in NATO that excludes the breaching of the nuclear threshold. In military terminology, the study is to determine if it is possible to establish a conventional NATO posture in Europe that will lead to the destruction of the Soviet and Pact forces (in case they launch an attack), will preclude the Soviets

from launching meaningful follow-on operations, and will force them to seek a political settlement, either as temporary or permanent solution to their dilemma.

THE STUDY APPROACH

The objective of this study is to develop a NATO strategy that is dedicated to the destruction of the Warsaw Pact as an effective military force and organization. A plan of operations will be developed to implement the strategy in case of attack by the Pact forces through Germany. The plan is predicated on the assumption that the nuclear threshold will not be breached.

Such a plan can be based on two tactical concepts. The first involves the buildup of the NATO ground forces to such high levels that any Pact forces can be annihilated by counterattacks. Any study involving this option degenerates rapidly into a numbers game involving force and combat ratios of NATO and Pact forces. Needless to say, it represents a politically unacceptable, very expensive, and possibly economically unviable option. Consequently, it is not addressed further in this study.

The Pact forces could be also destroyed by a large scale envelopment. Such an operation would require smaller forces and is consequently more attractive as a concept for deterrence from a political standpoint. However, the operation will be feasible only if the Pact has assailable flanks (Fig. 1).

THE ASSAILABLE FLANKS OF PACT FORCES

The terrain in central Europe is characterized mostly by natural obstacles such as mountains on the one hand, and high speed avenues

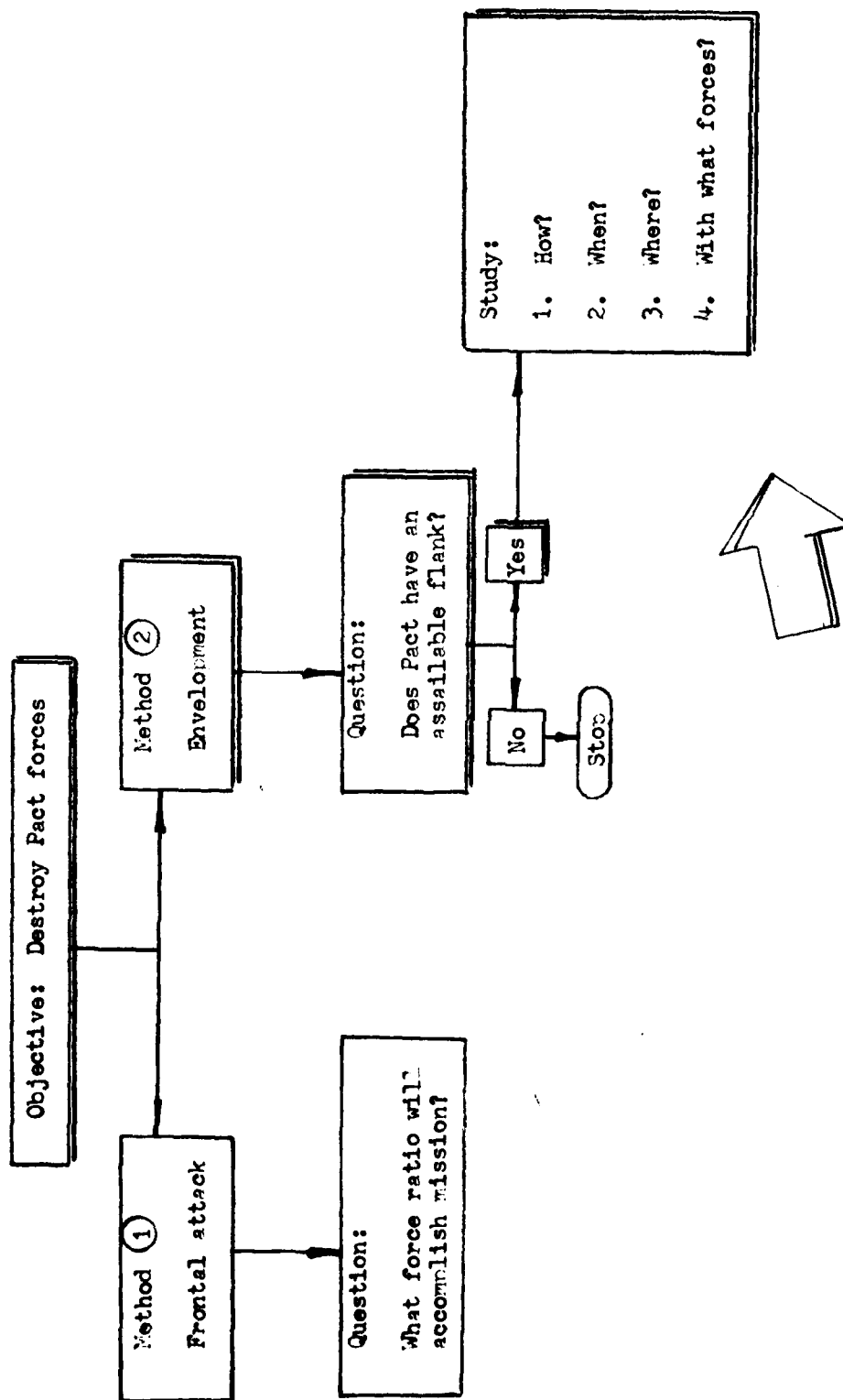


Figure 1. Strategic Concept Decision Tree

of approach on the other.¹ The latter are relatively densely populated and incorporate numerous transport routes (Fig. 2).

The first high speed avenue between the Pact and the NATO forces is the north German plain, characterized by moderate population density, some towns, farms, some woodland and flat to hilly topography. The second avenue runs from southern Germany through Austria and by way of Wien (Vienna) through Hungary into the eastern part of Romania. This natural route for invasion forces has numerous branches that, after crossing some rugged terrain, connect with northeast Italy and the Polish plain.

It is significant that of the two land approaches discussed, the northern German plain is strongly defended by the Pact forces, while the approach into southern Poland by way of Austria and central Czechoslovakia, has been left practically unguarded.

The terrain in Poland has been known for ages as a high speed avenue into Europe or Russia. The major river obstacles that would impede military operations run generally from southeast to northwest. Into this category fall the major rivers of the Vistula and its tributaries, the Oder and also sections of the Warta. It can be concluded that any invasion of Poland launched along the southeast to northwest axes will meet minimum river obstacles.

A further examination of Central and Pact dispositions reveals that the Pact has two distinctly assailable flanks (Fig. 3). The first is an amphibious route through the Straits of Kattegat, the southern Baltic, and to the coast of northern Poland or the Gulf of Danzig. The second route is through the Donau (Danube) Valley of Austria to the city of Wien and

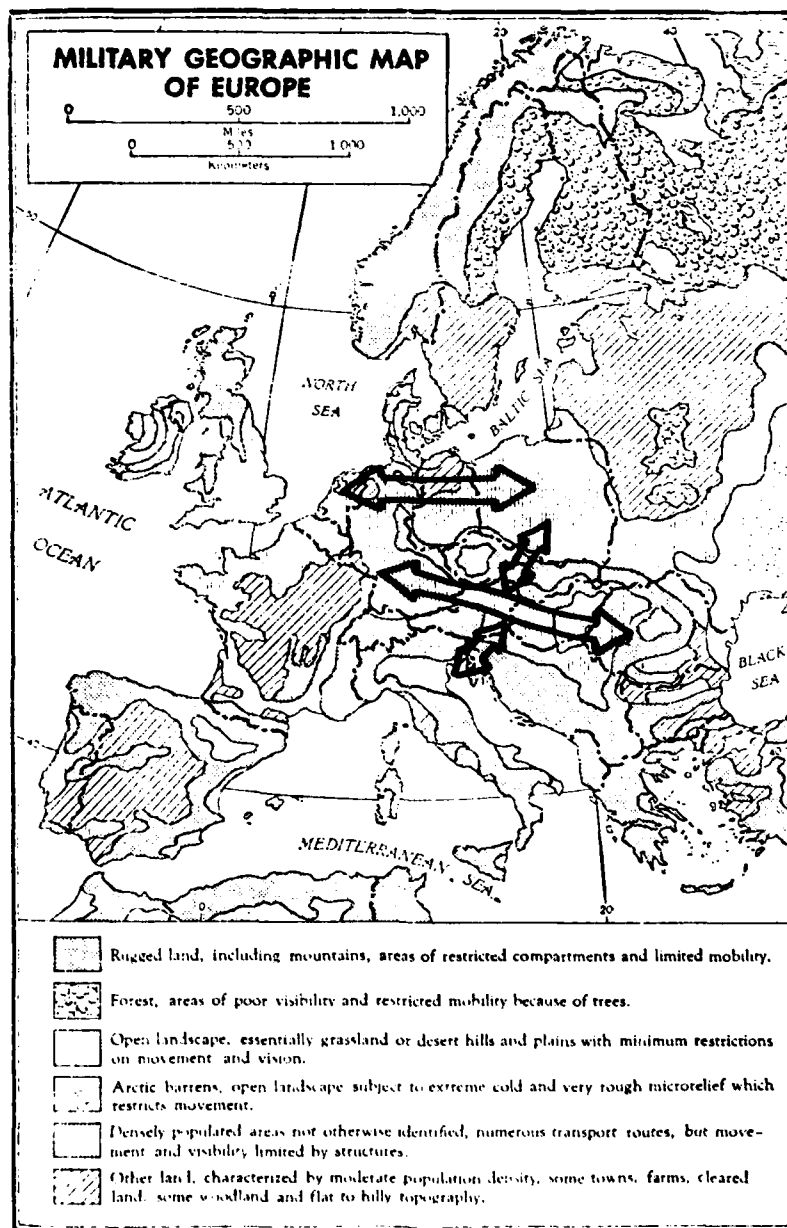


Figure 2. Central Europe is dominated by two east-west high speed invasion routes.



Figure 3. The Assailable Flanks of the Pact Forces.

then penetrates Czechoslovakia along the Breclav-Orstrava axes to southern Poland. Both flanks have certain attractive features as well as disadvantages.

The Baltic flank has the clear advantage in that the allied naval and air forces can be concentrated to an advantage in this area (Table 1). Large sections of the east German and Polish coast are suitable for amphibious operations. Finally, the Soviet Baltic fleet is expected to be relatively weak at the outbreak of hostilities. The major disadvantage of the Baltic flank is its dependence on the control of Denmark. Clearly, with the Soviet occupation of Denmark, the Baltic ceases to be an assailable flank for the Pact. Under conditions similar to the current disposition of Pact and NATO forces, the retention of Denmark in the face of a determined Pact attack remains highly problematic. Consequently, development of any strategy that hinges exclusively upon a large scale envelopment through the Baltic can be considered only when the defenses in Denmark are reinforced sufficiently to repel land attacks through Schleswig-Holstein, as well as any air and amphibious assaults.

The southern flank of Pact through Austria, Czechoslovakia and southern Poland projects a possibility for a deep penetration/envelopment. Up to Wien, the avenue of approach is serviced by excellent roads and superb railway systems. In addition, the operation can be supported from northern Italy by means of a highway and railway link that runs through southeast Austria. The major disadvantages are the difficult terrain and roads in north central Czechoslovakia, and the long supply route from southern Germany (Stuttgart to the border of Poland is 957 km or 595 miles by road). The road from Trieste is only slightly shorter (798 km/496 miles).

TABLE I

EVALUATION OF PACT FLANKS

	<u>ADVANTAGES</u>	<u>DISADVANTAGES</u>
<u>BALTIC</u>	<ol style="list-style-type: none"> 1. Polish coast is suitable for amphibious operations 2. Easy to mass ground and air forces 	<ol style="list-style-type: none"> 1. Depends on control of Denmark 2. Baltic constrained for naval operations
<u>AUSTRIA</u>	<ol style="list-style-type: none"> 1. Superb road, rail, and river network to Wien 2. Operation can be supported from N. Italy 	<ol style="list-style-type: none"> 1. Extremely long overland LOC to Atlantic

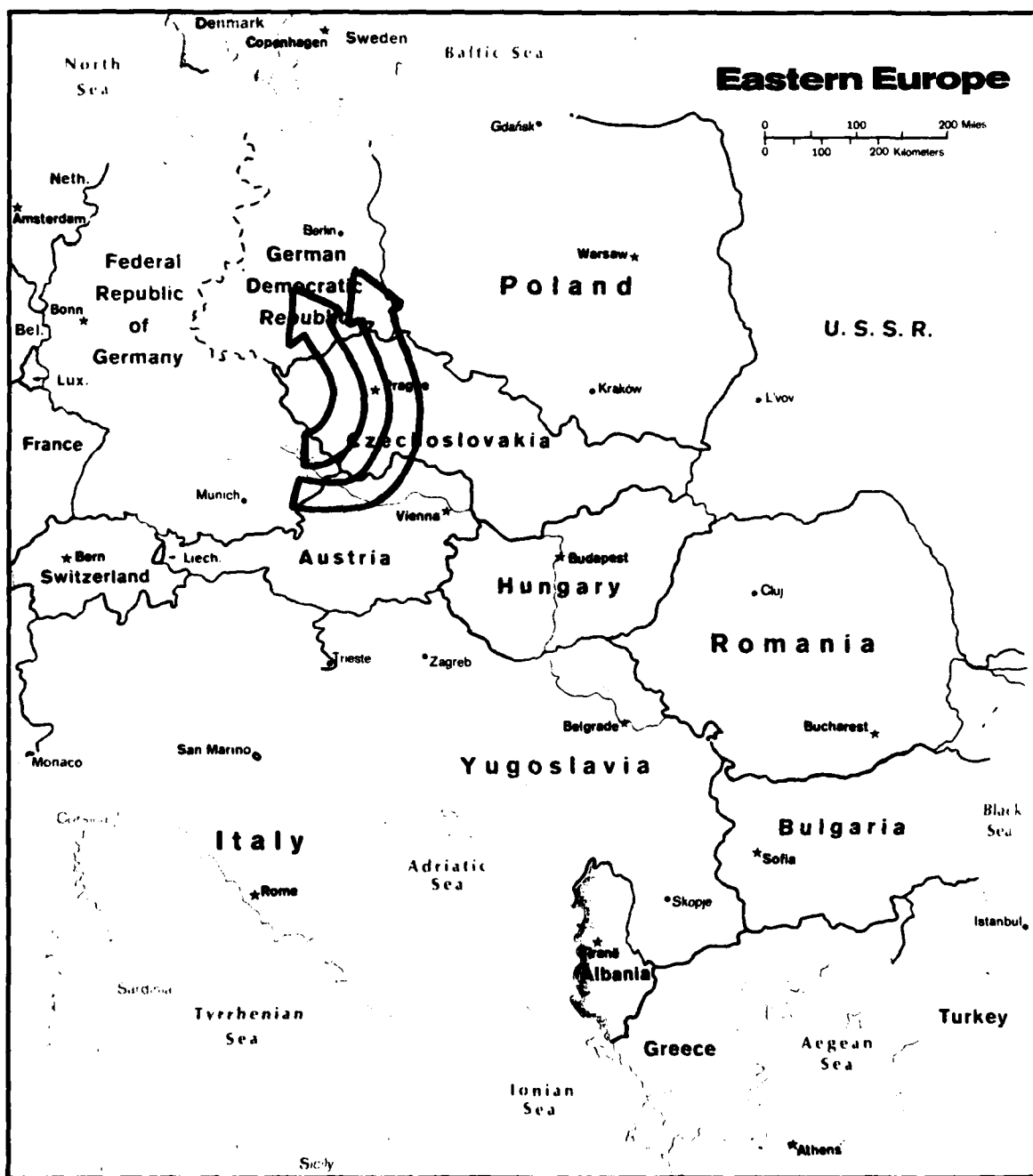


Figure 4. Flanking Movement through Western Czechoslovakia.

An alternate avenue for envelopment would proceed through western Czechoslovakia (Fig. 4). It is shorter and more attractive from a logistics standpoint. Its disadvantages are the defensible terrain of Czechoslovakia, especially on the north, south, and western borders, and the concentration of Soviet and Czechoslovakian combat units in this part of the country. The envelopment that heads in the direction of Berlin will be most likely too shallow to capture the preponderance of the Pact forces. As a result, this approach has been rejected while the double envelopment through Austria and the Baltic is selected for further study.

THE BASIC OPERATIONAL CONCEPT

The chosen operational concept is based on two major suppositions. First, that subsequent to the Pact attack, the Pact forces will be concentrated in East Germany and in the occupied territories of West Germany. The second is that these forces will be captured by a deep envelopment.

To execute this scenario, various options have been developed and analyzed as follows:

OPTION 1

(See Figure 5)

1. Concept

1.1 Delay in Northern Germany to Ems River with pivot at Fulda.
Hold on Czechoslovakia border.

1.2 Hold Denmark or make amphibious landing south of Esbjerg, and isolate/capture Soviet forces in Denmark.

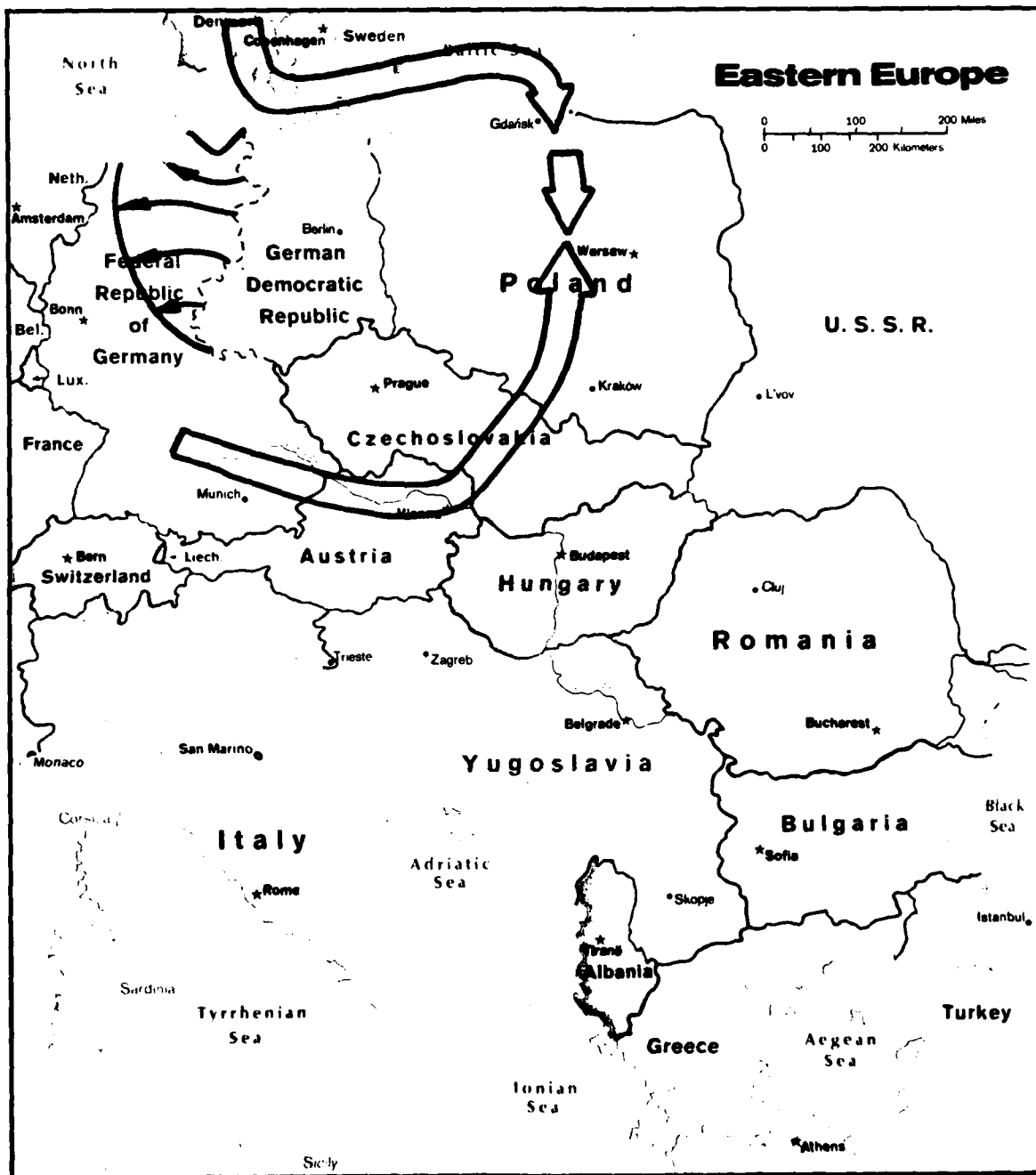


Figure 5. Double Envelopment, Option 1.

1.3 From Denmark establish air superiority over southern Baltic. Clear Baltic of Soviet combatants and deny evacuation through Baltic.

1.4 Execute amphibious landing at Gulf of Danzig with reinforced corps. Drive to Wloclawek.

1.5 With POMPCUS forces drive to Vienna, Katowice and then close envelopment at Wloclawek.

2. Advantages

2.1 Two penetrations, both shorter than a single envelopment maneuver.

2.2 Reinforcements from US earmarked for invasion in Danzig area can be easily diverted to Netherlands or North Germany in case of emergency.

2.3 Clearing of Mediterranean is not necessary.

3. Disadvantages

3.1 Complete operation depends on holding or retaking Denmark. In either case, an uncertain proposition from scheduling standpoint.

3.2 Holding Denmark could dilute the concept of falling back on northern flank in order to induce Soviets to commit major forces in that region.

3.3 PACT failures in Northern Germany and/or Denmark might induce Soviets to switch forces for a major offensive through Czechoslovakia or Austria.

3.4 Invasion force through Baltic is more vulnerable to attack in channel and North Sea than it would be in its approach to and through the Mediterranean.

3.5 The single line of communications to the southern enveloping force is long and uncertain.

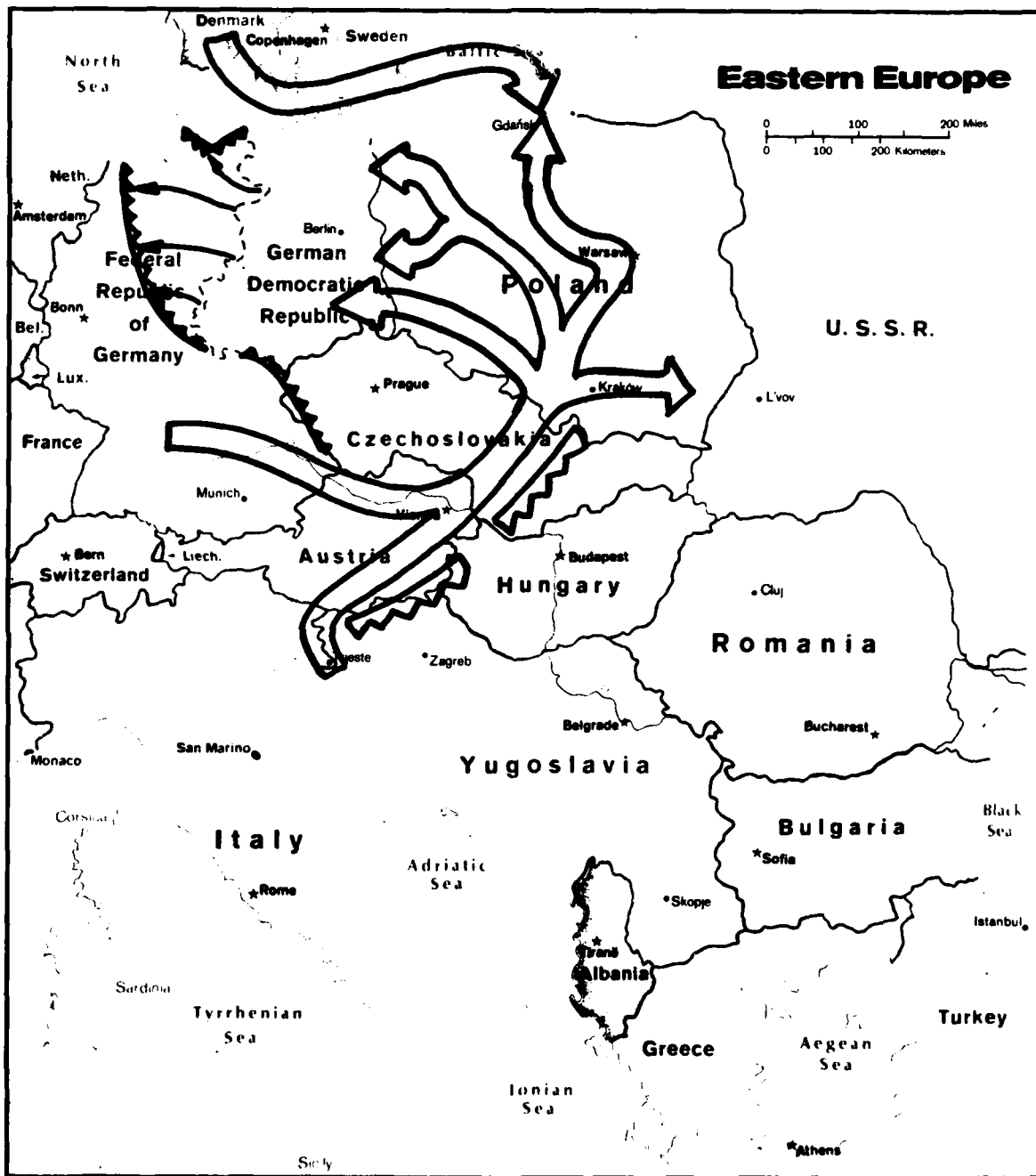


Figure 6. Single Envelopment with two LOC's and an amphibious linkup, Option 2.

3.6 Inability to establish air superiority over the Baltic and to clear the area of Soviet surface combatants will cause the operation to collapse.

4. Discussion

This option is discarded because of the large uncertainty associated with holding or retaking Denmark. Since Denmark is the key to the whole operation, such uncertainty is considered unacceptable for planning purposes.

OPTION 2

(See Figure 6)

1. Concept

1.1 Delay in northern Germany to Ems River with pivot at Fulda.

Hold on Czechoslovakian border.

1.2 Hold Denmark and Schleswig-Holstein if possible.

1.3 Seal off Mediterranean at Gibraltar, Bosphorus/Dardanelles and Suez. Clear Mediterranean of all Soviet surface combatants.

1.4 Establish air superiority over northern Adriatic and Austria, Hungary, and Yugoslavia.

1.5 Execute amphibious operation or an administrative debarkation in northern Italy in the Trieste-Rijeka area with one reinforced corps (floating POMCUS).

1.6 With activated POMCUS units in FRG, initiate envelopment through Wien and Katowice.

1.7 With the corps that has landed at Trieste, link up with POMCUS units at Wien by way of Austria or northern Yugoslavia/Hungary. The

corps is to protect the southern and eastern flank of the enveloping force and will establish and guard the logistic line of communication to the enveloping force.

1.8 From Denmark, England, Belgium, Netherlands and FRG, establish air superiority over the southern Baltic. Deny evacuation of Soviet armed forces through Baltic. Prepare to link up with enveloping forces in the Gulf of Danzig area.

1.9 Complete envelopment by reaching Gulf of Danzig.

2. Advantages

2.1 The operation does not hinge on Denmark for success.

2.2 Southern and eastern flanks are protected.

2.3 A supplementary and shorter line of communications is established from Adriatic.

2.4 Sea lines of communication (SLOC) to Mediterranean are less subject to interdiction by the Soviet navy than SLOC to Baltic.

2.5 The major thrust of the operation cannot be determined until the forces penetrate Czechoslovakia.

3. Disadvantages

3.1 Inability to establish air superiority over the Adriatic, Yugoslavia, Hungary, and Austria will make the operation untenable.

3.2 Inability to seal and clear Mediterranean will lead to the abort of the debarkation operations in the Adriatic.

3.3 Once the convoy with ground forces has entered the Mediterranean, these forces cannot be readily diverted to northern Germany or Netherlands.

4. Discussion

4.1 Should it be impossible to achieve sufficient air superiority

over the Adriatic to land the corps, then the forces can be off-loaded on the west coast of northern Italy (Genoa). This will add about 300 ground miles and surprise might be lost. The advantages are that some sailing time will be saved, the landings will be unopposed (in friendly ports), and the extra 300 land miles will be through the territory of a NATO ally.

4.2 If a critical situation develops in southern Germany, all or part of the amphibious force can be landed in southern France and move to the Freiburg-Stuttgart area through the Rhone Valley.

Option 2 has been selected for further development in this study for the reasons stated. In addition to the advantages listed, the landing of floating POMCUS in the Adriatic will deceive and confuse the enemy regarding the true thrust of the operation. The Adriatic activity could be viewed as a Balkan oriented thrust. The subsequent penetration of Austria by POMCUS units can also be viewed as either south (Balkans) or north (Poland) oriented. The uncertainty introduced by these two operations will delay enemy reactions and enhance the element of surprise. The latter is a vital ingredient of the selected concept.

CHAPTER III

FOOTNOTES

1. Louis C. Peltier and G. Etzel Percy, Military Geography, pp. 88-89.

CHAPTER IV

STUDY GROUND RULES AND ASSUMPTIONS

A number of assumptions and ground rules have been established in respect to the political situation and NATO forces for the year 1983. The Pact forces are treated separately in Appendix 3.

POLITICAL GROUND RULES

The military strategy that has been selected for this study involves the envelopment of the Pact forces through Austria, Czechoslovakia and Poland. While the NATO forces are expected to be in a state of war with Poland and Czechoslovakia, Austria will most likely retain its neutrality, as long as it remains free from invasion. This means that in order to execute the proposed operation, the NATO forces must violate the Austrian neutrality. We have assumed at this point that, in view of the prospect of a Pact invasion, the Austrians will welcome the positioning and transit of NATO forces through its territory. It is also anticipated that our State Department will undertake certain discreet negotiations to cover such eventualities. While the Austrian leadership might be reluctant to allow the use of their territory by any foreign armed forces, they undoubtedly must realize that their armed forces can offer little more than token resistance to either Pact or NATO invasions. Other political assumptions include the following:

1. Yugoslavia will remain neutral and resist incursions by Pact forces.
2. Romania, Albania and Bulgaria will not participate in the Pact effort.

3. Hungarian air and ground forces will be used in Hungary with only limited incursions into neighboring countries. Soviet forces in Hungary will attack NATO forces.

4. Czechoslovakian air and ground units, including Soviet forces in Czechoslovakia, will engage NATO forces on the FRG border.

5. Polish forces and Soviet forces in Poland will engage NATO forces as part of the first front.

It has been assumed that upon conclusion of the envelopment operation, the East European countries will either withdraw from Pact or refuse to participate or support Pact operations. While it is conceivable that some nations, such as Poland, Czechoslovakia, Hungary or Romania might switch sides as a result of the operation, no such assumptions have been made for the purpose of this study.

Once the Pact forces have been surrounded, it is assumed that the Soviet Union will seek a political solution without deploying its major ground and air units from the Asian military districts.

THE NATO GROUND FORCES

By the year 1983, the NATO forces will consist of the forces^{1,2} available in 1980, plus the following (see Table 2):

1. Four additional US divisions will be POMCUS in FRG, for a total of 6 divisions. All operational by 11 July 1983 (D + 7). In addition, the POMCUS units will include the artillery for the four corps participating in the campaign and the necessary logistical organizations (Host nation support will be unavailable in Austria, Poland and Czechoslovakia).

2. A total of 5 US divisions and one Bde, including the RDF, will arrive by sea/air on 10 July 1983 (D + 6).

TABLE 2

STUDY GROUND RULES AND ASSUMPTIONS

1. Warsaw Pact forces attack on 4 July 1983 with 5 days prior warning and with forces in place across East German and Czechoslovakian borders into West Germany. Pact reinforcements from the military districts of Baltic, Byelorussia, Carpathia, Kiev, Leningrad, Moscow, and Odessa will arrive during the period of D + 3 to D + 8.
2. THE PACT GROUND FORCES for 1983 will be as defined by DIPP Volumes 4A and 4B⁵.
3. THE NATO GROUND FORCES for 1983 will consist of the forces of 1980 plus the following:^{6,7}
 - 3.1 Four additional divisions POMCUS, for a total of 6 divisions. All operational by 11 July 1983 (D + 7).
 - 3.2 A total of 4 US divisions and one Bde, including the RDF, will arrive by sea/air on 10 July 1983 (D + 6).
 - 3.3 A minimum of 2 armored and 2 mechanized divisions will be equipped with XM-1/XM-2 or with M-551/M-113.
 - 3.4 All mechanized and armored divisions have 11 Bn-s.
 - 3.5 US Reserve forces will not be used. When available, they will constitute theater reserves or will be deployed on the Vistula.
4. US MARINES. One MAF will be available to conduct amphibious operations in the southern Baltic on or after 17 July 1983 (D + 13).
5. NATO NAVAL FORCES will be able to clear the Mediterranean of surface threat in 48 hours. The first US convoy will be able to enter the Mediterranean on D + 3.
6. THE FRENCH FORCES will join NATO on 7 July 1983 (D + 3).
7. The ground campaign starts on 11 July 1983 at 0700 (D + 7).
In the next 9 days the Warsaw Pact is to be destroyed and the following countries neutralized:
Czechoslovakia
Poland
East Germany

8. Once Pact forces have been surrounded, Soviet Union will seek a political solution without deploying ground and air units from its Asian military districts.
9. Nuclear threshold has not and will not be breached.
10. Additional NATO air, ground and naval forces that are necessary to achieve the campaign objectives but are not expected to exist in July 1983 will be defined during the course of the study.

3. The lead elements of the enveloping force, or a minimum of 2 armored and 2 mechanized divisions will be equipped with the high speed³ XM-1/XM-2 or with M-551/M-113.

4. All mechanized and armored divisions have 11 full strength Bn-s. No reserve round out units will be used.

5. US reserve forces will not be used during the campaign. When available, they will constitute theater reserves or will be deployed on the Vistula.

6. Other NATO forces (primarily FRG) will be increased sufficiently to give them the ability to hold and delay the Pact attack for a minimum of 2 weeks without the US POMCUS units.

THE US MARINE CORPS

One MAF will be prepositioned on the US east coast. It will be ready to sail for Europe and conduct amphibious operations 17 days following notification (D +12/M +17).

THE NATO NAVAL FORCES

The US Sixth Fleet and other NATO forces will be able to clear the Mediterranean of Soviet surface threat in 48 hours. The US convoy with the equipment for the RDF units will be able to enter the Mediterranean on D + 3. The NATO naval units will be able to insure safe trans-Atlantic passage of the Marine Amphibious Force (MAF) and will be able to support the amphibious operation in southern Baltic (northern Poland).

THE NATO AIR FORCES

See Chapter VII

THE FRENCH FORCES

The French forces will join NATO on 7 July 1983 (D+3) and will not exercise the nuclear option.

CBR WARFARE

The nuclear-chemical or biological threshold will not be breached by either the Pact or the NATO commands.

CHAPTER IV

FOOTNOTES

1. David C. Jones, United States Military Posture for FY 1980, pp. 5-6.
2. Donald B. Vought and J. R. Angolia, "The United States Army," in The US War Machine, ed. by Ray Bonds, pp. 68-85.
3. Percy A. Pierre and Donald R. Keith, Army Weapon Systems, pp. 1, 29.
4. Harriet Fast Scott and William F. Scott, The Armed Forces of the USSR, p. 174.
5. Defense Intelligence Agency, Defense Intelligence Projections for Planning (DIPP), Volume 4A, pp. 151-157.
6. Jones, pp. 5-6.
7. Vought and Angolia, pp. 68-85.

CHAPTER V

PLANNING ISSUES AND COMMAND RELATIONSHIPS

The NATO forces will launch a combined ground, air and sea counter-attack on 11 July 1983 (D + 7). The ground campaign will start at 0700 and will consist of a large land and sea envelopment designed to trap most of the Pact forces in Germany. In the following nine days the Pact is to be destroyed as a viable military coalition with Poland, Czechoslovakia, and East Germany occupied by NATO forces.

PLANNING ISSUES

The operations are based on the military premise that once the enemy's plan is defeated, the enemy is defeated. Consequently, the objective of the campaign is to shift the center of gravity of the war from West Germany to central Czechoslovakia and Poland. In order to execute the operation, the following conditions must be achieved:

1. Surprise

Until the enveloping forces penetrate central Czechoslovakia, the plan and the campaign objective must remain hidden from the Soviet command.

2. Speed

The enveloping units must retain convoy type rates of advance through Austria and central Czechoslovakia. In order to achieve this, unquestionable air superiority must be maintained over the corridor used by the enveloping forces. This critical requirement for air superiority lasts for a minimum of 48 hours.

3. Timing

The time of the attack is all important. The operation should be launched only when the bulk of the Soviet forces from their eastern military districts (fronts four and five) have transited Poland into Eastern Germany. Should the enveloping force encounter most of the Soviet forces from the eastern military districts, then the operation will most certainly fail to achieve its objectives. For the purposes of this study, it has been assumed that the Pact second echelon forces will clear Poland on D + 8. Should the Pact accomplish the deployment of the forces as early as D + 3, no change in NATO plans will be necessary. For every day that Pact delays past D + 8, the start of the ground envelopment operation must be delayed accordingly. Some of the unusual planning issues are summarized in Table 3.

COMMAND RELATIONSHIPS

The Command and Control system must satisfy certain fundamental requirements. First, planning and preparations must be carried out in secrecy. Control must be exercised over Army, Air Force, Marine, and Naval units. The campaign will span only about two to three weeks. Upon its conclusion, all tactical units revert to the control of their original headquarters.

A Unified Command will be established to command the operation. It will exercise its authority by command of the units under its operational control, request support directly from other commands, and will coordinate plans and activities with Allied Command Europe (ACE) (Fig. 7). This new headquarters will command one ground army including the associated

TABLE 3

SOME UNUSUAL PLANNING ISSUES

1. General

- 1.1 Establishment of strategic surprise through deception.
- 1.2 The acquisition of accurate and timely intelligence on the movement of all major Soviet units.

2. Army

- 2.1 Maintenance of high speed movement through Austria and central Czechoslovakia.
- 2.2 Air defense of the advancing columns against Pact helicopter and low fixed wing threat in Austria and Czechoslovakia.

3. Air Force

- 3.1 The establishment of air lines of communications into Poland.
- 3.2 The interdiction of Pact tactical bridging on the Oder and Vistula Rivers.
- 3.3 Preclude the evacuation of Pact forces through Baltic.

4. Navy

- 4.1 Convoy operations in Adriatic.
- 4.2 Penetration of Baltic Sea to preclude Pact evacuation.
- 4.3 Amphibious operation in the Baltic Sea.

5. Department of State

- 5.1 Transit rights in Austria.
- 5.2 Possibility of minimizing or avoiding the involvement of Poland, Czechoslovakia, Hungary, and Yugoslavia in the conflict.
- 5.3 The evacuation of Polish armed forces to the east of Vistula

River by D + 8.

6. Marine Corps

6.1 Amphibious operations on the Polish coast.

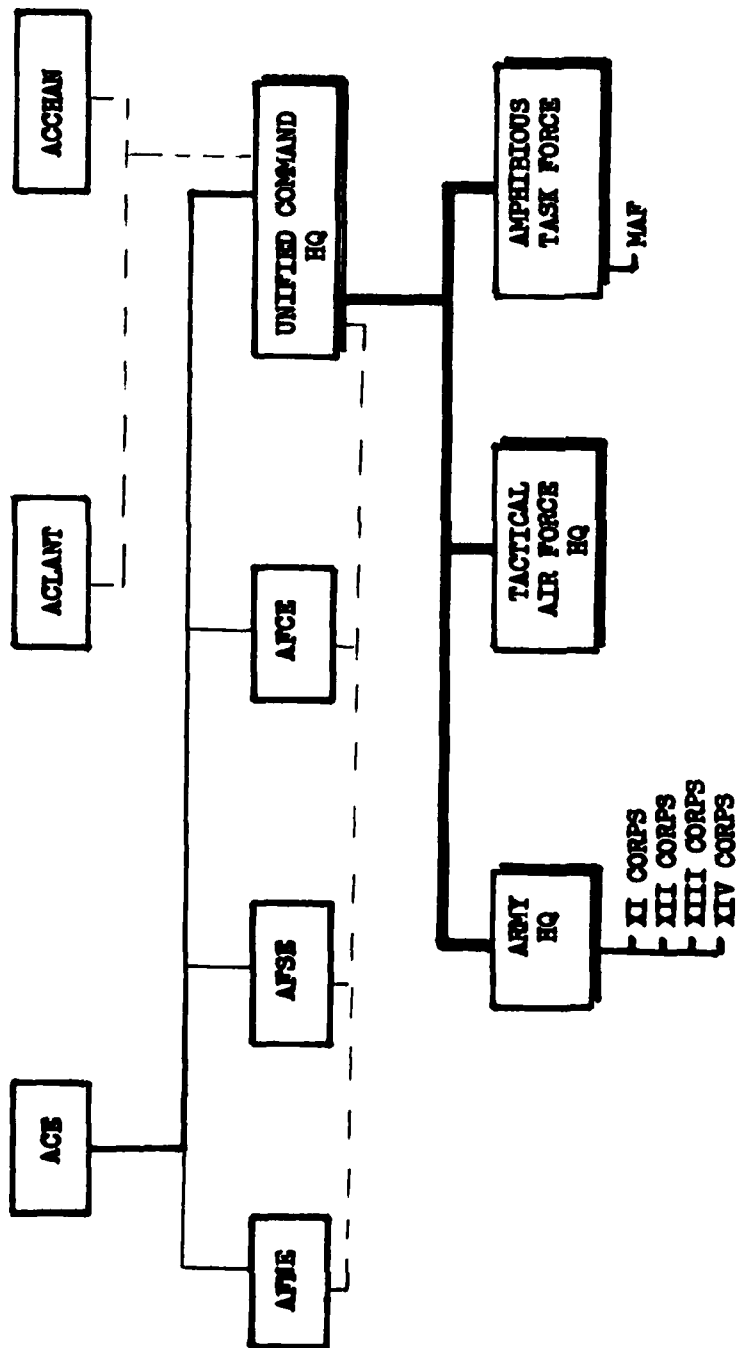


Figure 7. Command Relationships

logistics. In addition, it will command the tactical air assets assigned to support the operation through a Tactical Air Force headquarters. It will coordinate with Allied Command Atlantic (ACLANT) and Allied Command Channel (ACCHAN) all aspects of the operation involving naval support but will usually not command Navy or Marine assets. However, since the amphibious operation in the Baltic must be closely integrated with land operations in Poland, the Unified Command will assume overall command of the amphibious task force when it enters the Kattegat.

It should be noted that the Unified Command is not restricted by geography and operates in the areas of northern, central, southern regional commands. It is on equal footing with these commands (Fig. 7).

A unified planning organization should be established in 1981 or a minimum of 12 months prior to the campaign. This organization will furnish the nucleus for the Unified Command Headquarters, to be activated upon receipt of the tactical warning regarding the impending attack (D + 5). The major commands reporting to it are the Army HQ, consisting of the four corps and all ground forces assigned to the enveloping operation, and a separate Air Force HQ, especially established to control all air operations in support of the campaign. The key characteristics of the command structure are listed in Table 4.

TABLE 4

COMMAND STRUCTURE FOR THE OPERATION

1. A Unified Command will be activated to control and execute the operation (on equal footing with central, northern, and southern regional commands).

2. Air Force

2.1 A new US Air Force HQ will be established to direct the air operation. It will report directly to the Unified Command.

2.2 Upon conclusion of the operation, the USAF HQ will be dis-established. The air assets will revert to AAFE control (4 ATAF).

3. Army

3.1 A new army HQ with four subordinate corps reports directly to a Unified Command.

3.2 Upon conclusion of the operation, the new army HQ is dis-established. The corps revert to CENTAG control.

4. Navy

4.1 The amphibious task force comes under the command of the Unified Command HQ prior to entry into the Baltic.

4.2 Upon conclusion of the amphibious operation and establishment of sea lines of communication to Poland, the ATF will be dis-established.

CHAPTER VI

ALTERNATE NATO STRATEGY, THE LAND CAMPAIGN

The short land campaign is broken into three parts. The first, and most critical phase, involves the dash across Austria and central Czechoslovakia to south Poland (D + 7/D + 8). The second phase (D + 9/D + 12) is the Polish campaign which will establish our forces on the Vistula and Oder Rivers and seal the escape routes for the surrounded Pact forces. The third phase (D + 13/D + 15) includes a logistic linkup through the Baltic, linkup of the XI Corps with NATO forces at Fulda, consolidation of the forces in Poland, preparation for return of the four corps to CENTAG, the tactical air assets to AAFCE, and the dis-establishment of the Unified Command Headquarters.

ORGANIZATION FOR COMBAT

The ground units^{1,2} are organized into four corps under one Field Army headquarters, as shown in Table 5. The units are all POMCUS type organizations and fall into two basic categories. The first involves POMCUS units in FRG. This includes six divisions, two infantry Bde-s, one cavalry regiment, three engineer combat BN-s, the associated corps artillery for all four corps, plus the necessary signal and ADA Bn-s, MP and medical detachments, etc. The second source of units is the Rapid Deployment Force (RDF) whose equipment has been prepositioned in the European theater on 24 RO/RO type ships plus some fast deployment ships. A total of five division sets of equipment (mechanized) are prepositioned at Gibraltar, plus one armored Bde, one combat engineer Bn, and other related CS and CSS units.

TABLE 5

THE ARMY ORGANIZATION

<u>CORPS</u>	<u>MAJOR UNITS</u>	<u>POMCUS LOCATION*</u>
XI	1st Cav Div 4th Mech Div 5th Mech Div 24th Mech Div E Bn 1 ea. FA Bn 12 ea.	Gibraltar/Trieste
XII	2nd Armored Div 1st Mech Div Mech Div 3rd Cav Rg E Bn 1 ea. FA Bn 10 ea.	Gibraltar/Trieste
XIII	9th Mech Div 7th Inf Div 194th Armored Bde E Bn 2 ea. FA Bn 7 ea.	Gibraltar/Trieste Gibraltar/Trieste Gibraltar/Trieste (1 of 2)
XIV	Mech Div 82nd Abn Div 197th Inf Bde 172nd Inf Bde Abn TF FA Bn 5 ea.	Gibraltar/Trieste Gibraltar/Trieste

* Unless indicated otherwise, all forces POMCUS in FRG.

It will be of interest that two mechanized divisions shown in the table as part of the floating POMCUS do not exist as of 1980. This represents a shortage in the current US force structure. These two units must be activated and trained before the projected campaign. An alternate solution would be to use French divisions (about 4) to accomplish missions assigned to these two missing units.

The XI Corps is heaviest of the three by design, since it will exert the major effort. The XII Corps has the second priority mission of closing the trap on the enveloped forces and linking up with the amphibious operation in the Baltic. Corps XIII and XIV have flank and LOC security missions.

INITIAL OPERATIONS, D to D + 6

The first seven days will be used by NATO to absorb the Pact attack and to prepare for the arrival of the second echelon Pact forces (fronts 4 and 5). It is of critical importance that tactical operations of the first week accomplish the following objectives; (Fig. 8)

1. The NATO forces must hold the Pact forces at the border south of Fulda, including the Czechoslovakian border.
2. The NATO forces should allow themselves to be pushed back to the River Ems in northern Germany. This controlled penetration by Pact forces should pivot on Fulda, and convey a message of success to the Soviet high command. The objective of this maneuver is to induce the Soviets to commit their remaining forces in Germany in an effort to reinforce apparent tactical success.
3. The NATO forces must hold on the Lubeck-Hamburg line, to permit

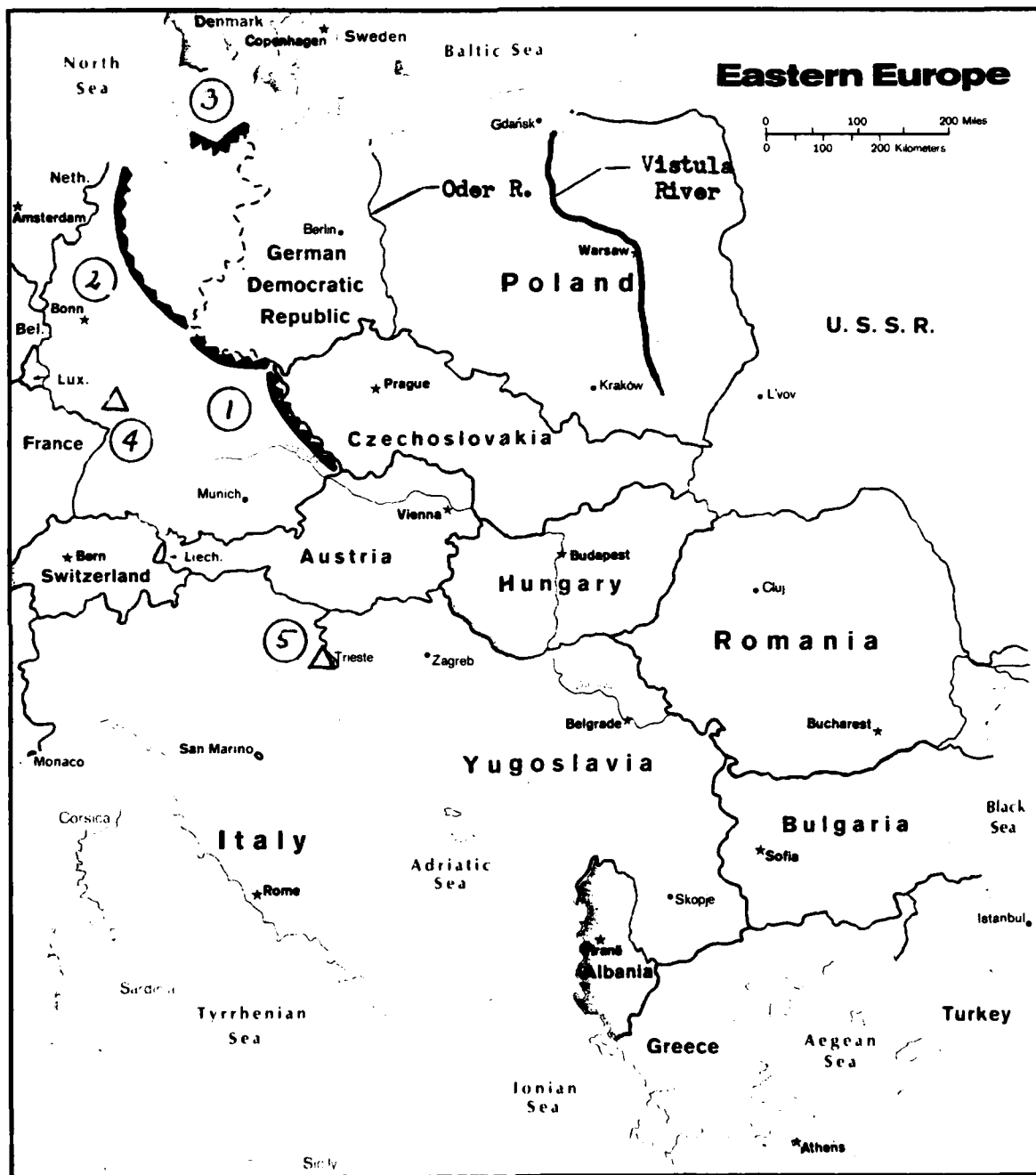


Figure 8. During the first week, NATO forces should fall back in the north but hold the Lubeck-Hamburg line.

the accomplishment of subsequent amphibious operations (see Chapter IX). In addition, the Elbe River west of Hamburg must be guarded against possible amphibious crossings.

The preparations for the activation of the POMCUS will also take place during the first week. The personnel will be flown from the US to the equipment sites in West Germany (item 4 of Fig. 8) and to Trieste (item 5) to pickup the floating RDF POMCUS.

The preparatory activities of the first week should be guided by cover plans for deception. While the Soviet high command expects the activation of the POMCUS sites in FRG, the landing of a major force in northern Italy is impossible to conceal and should become a major source of attention to the Soviet command. All efforts should be made to indicate that a Balkans or Yugoslavia/Hungary oriented operation is about to be executed. This deception plan should be coordinated with air activities against the Soviet forces and military targets in Hungary. (See Chapter VII)

THE ENVELOPMENT, D + 7 to D + 8

Prior to the start of the envelopment operation, the TAF will have destroyed most bridging over the Vistula and Oder Rivers, damaged the Pact tactical bridging stored in depots and degraded the operational effectiveness of the Soviet forces in Hungary. The Polish port of Gdynia and the Russian port Kaliningrad will have been mined by Tactical Air Force or naval aviation assets. Other steps are taken to preclude the evacuation of Pact forces by sea. (See Chapter IX).

The first two days (D + 7 and D + 8) are the most critical of the

operation. The enveloping forces depart southern Germany and Trieste, Italy, enter Austria, converge at Wien, and slice across Czechoslovakia along the line that delineates the Czechs from the Slovaks (Fig. 9). The units are expected to meet little or no opposition. The lead elements are to enter Poland 24 hours from the start of the operation, or at sunrise on D + 8. Concurrently with the invasion of Poland, the southeast flanks of the area will be secured by the XIV Corps. The US infantry task force currently in northern Italy will block the mountain passes on the Austrian border facing Yugoslavia, while the 82nd Airborne Division will secure the passes in the mountain range between Bratislava and Cieszyn (30 km east of Ostrava). The left flank, facing Czechoslovakia, will be secured by the 172nd and 197th Infantry Brigades (Fig. 11). The operation is predicated on the condition that the ATAF will mass counter air assets on the avenues of the operation and will insure air superiority.

It should be pointed out that once the enveloping forces penetrate Polish territory, most of the strategic objectives have been accomplished. Even should the forces fail to drive to the Baltic and to close the trap on the Pact forces, their presence will force the Soviet high command to reorient their operation from West Germany to southern Poland. The collapse of the Soviet operations in northwestern Germany would be most probably under these circumstances.

CONSOLIDATION IN POLAND, D + 9 to D + 12

Four days will be used by the forces to expand from southern Poland to the Vistula and Oder River lines (Fig. 10), and to the Baltic coast in order to linkup with the amphibious forces at Kolobrzeg (See Chapter IX)

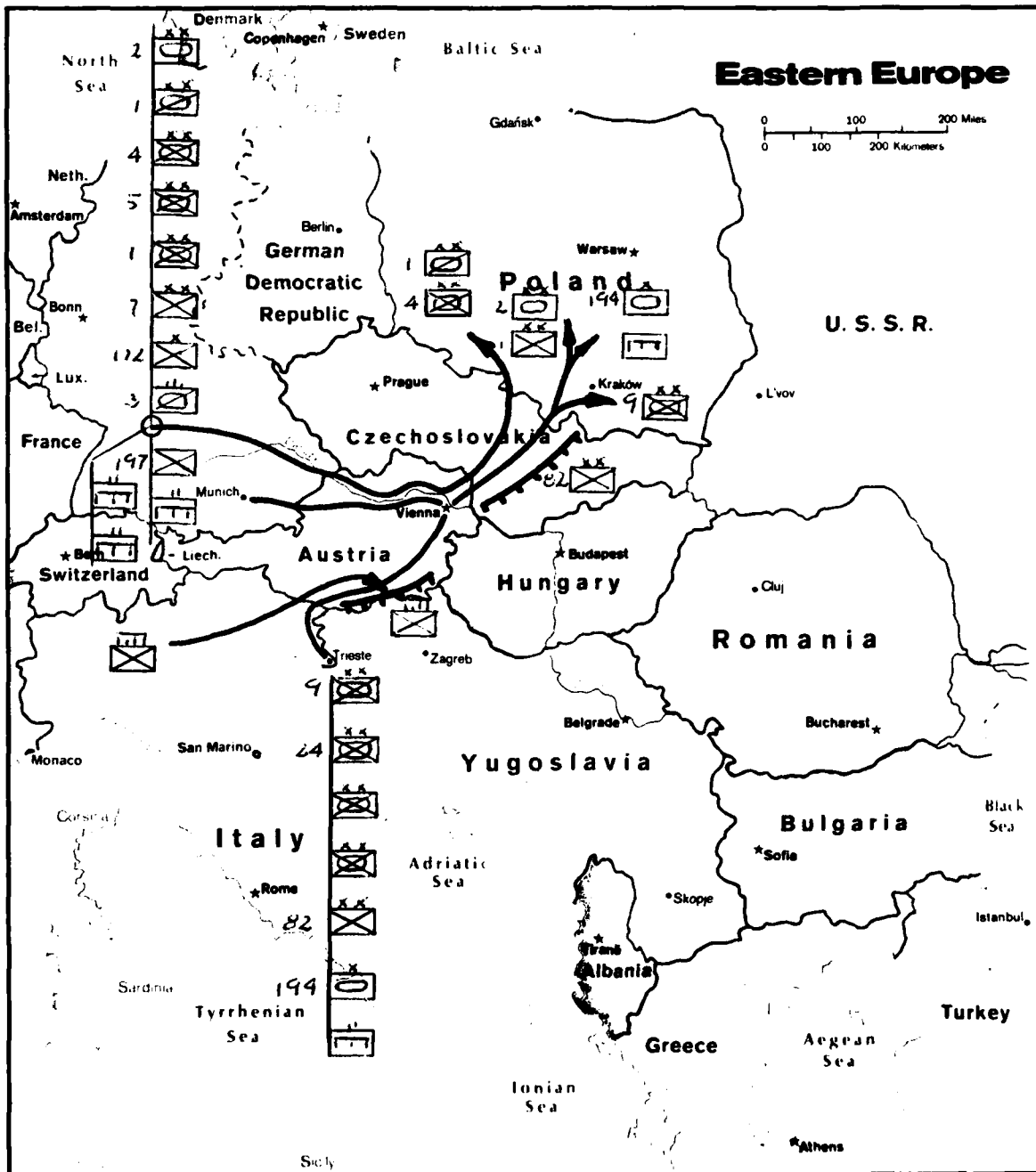


Figure 9. Ground Operations, D + 7 to D + 8.

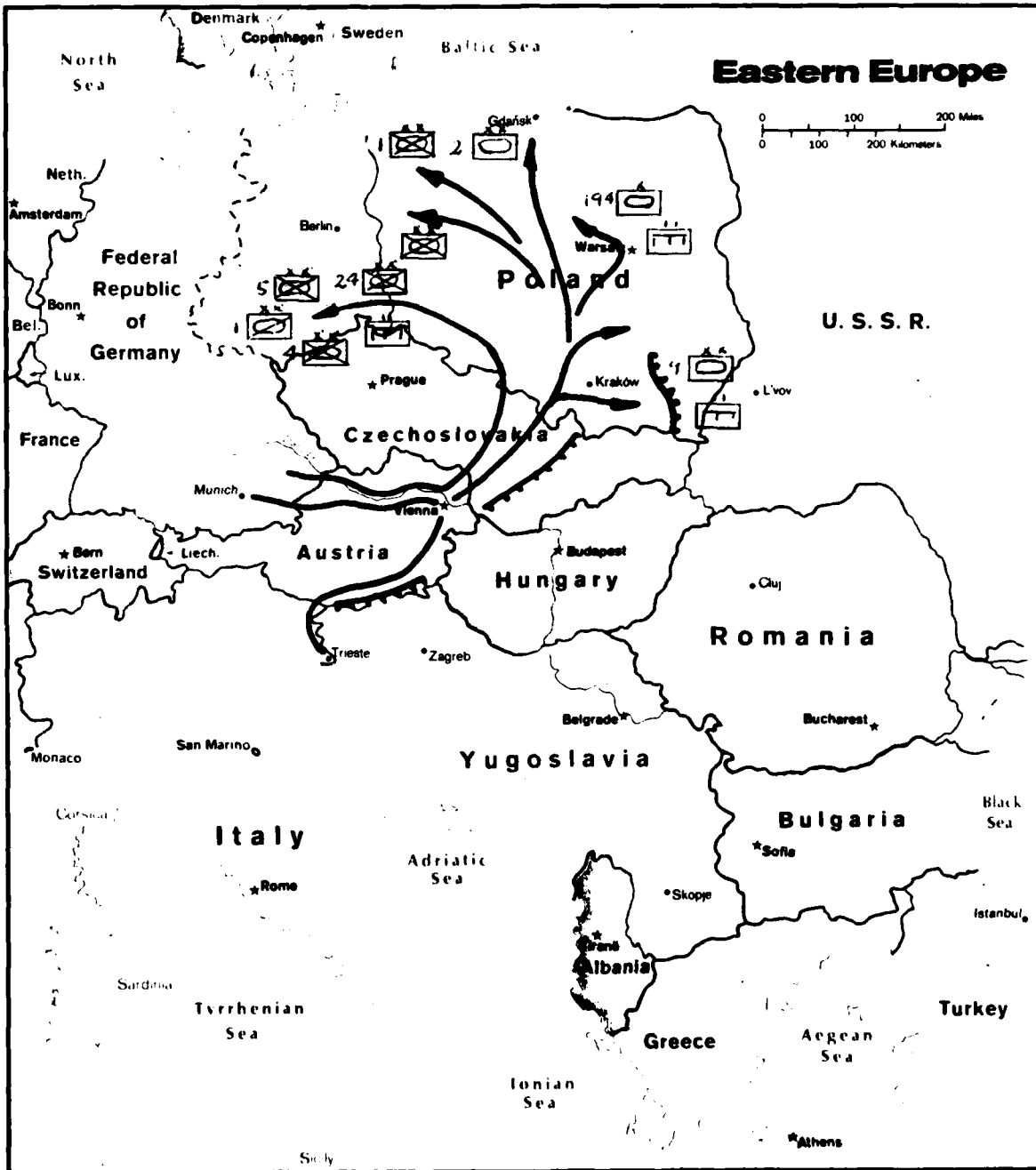


Figure 10. Ground Operations, D + 9 to D + 12.

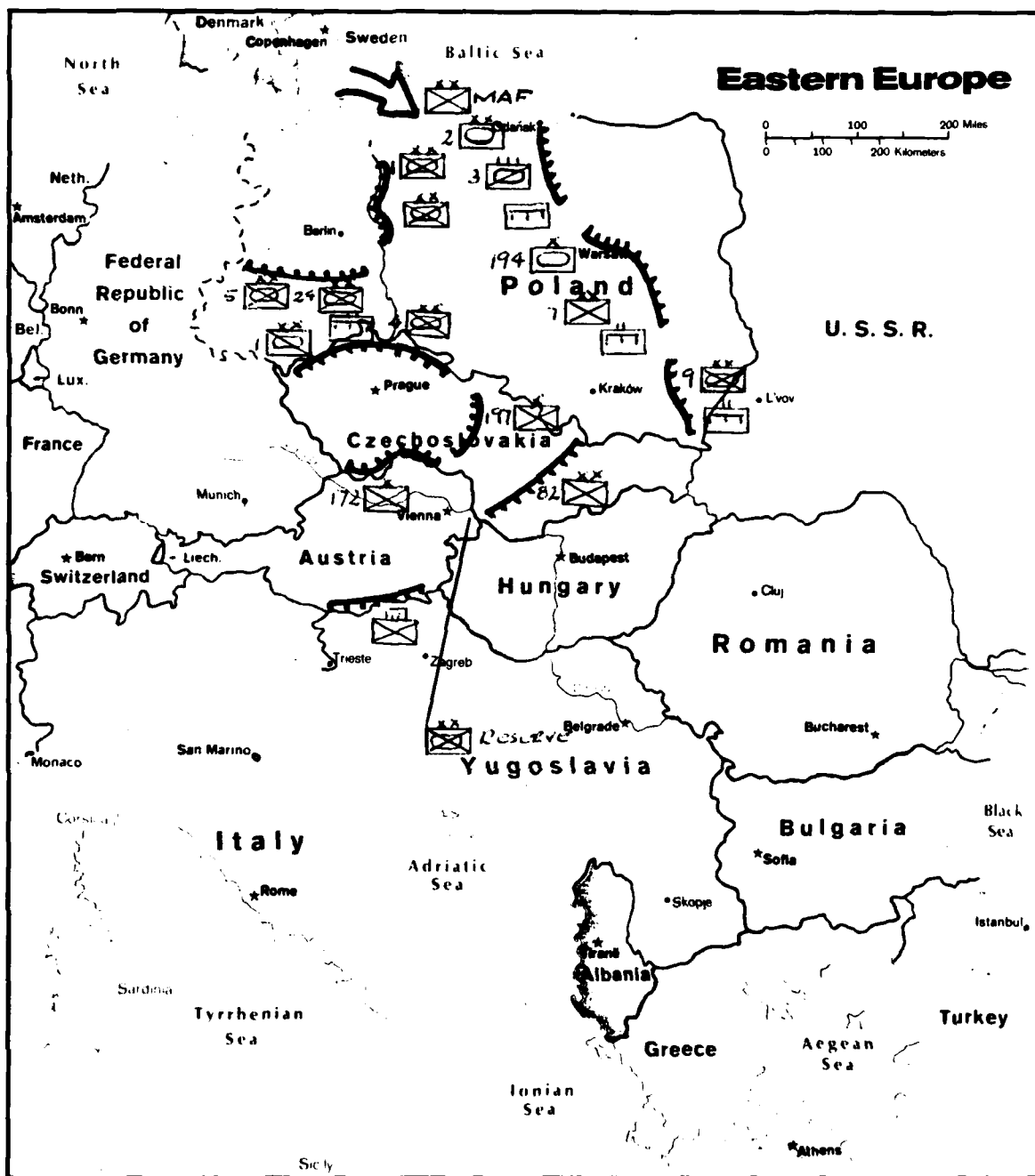


Figure 11. Ground Situation, D + 15.

on D + 13. Special attention will be devoted to capturing enemy airfields for Tactical Air Operations, and the blocking of any additional Soviet forces from entering Poland from the southeast (Jaroslav, Medyka and Sanok on the San River).

As was mentioned earlier, the XI Corps exerts the main effort. During this point in time they are moving west, around the western portion of Czechoslovakia. Their mission is to complete the encirclement of the western part of Czechoslovakia, to destroy the Pact logistical installations in the southern portion of East Germany, and to accomplish a link-up with NATO forces. However, the most important task is to let the Russian front commands know in no uncertain terms that they have been cut off and surrounded.

The mission of the XII Corps is to secure the Oder River line north of the Neisse River, to prevent the breakout of Pact forces to the east, to establish an alternate LOC from the Baltic, to screen the west bank of the Vistula River north of Wloclawek, and to intercept Soviet reinforcements. The task of the XIII Corps is simply to secure the right flank or the western banks of the Vistula and San Rivers, starting at Wloclawek in the north and running to the Carpathian Mountains in the south.

The security of the lines of communications rests with the XIV Corps, including the borders with Yugoslavia, Hungary, and the two parts of Czechoslovakia. The entire reserve, consisting of one mechanized division, will belong to the XIV Corps and be positioned south of Wien in order to block possible attacks from Hungary (Fig. 11).

LINKUP WITH NATO AMPHIBIOUS FORCES IN BALTIC

AND GROUND FORCES AT FULDA, D + 13 to D + 15

The linkup operations complete the encirclement of the Pact forces in two pockets (Fig. 11). The corps will have territorial responsibilities as shown in Figure 12. The army with its four corps will be served by four logistical lines of communications (Fig. 13).

Table 6 summarizes the maximum possible Pact forces³ that the operation might capture, a total of 124 divisions. The actual numbers would be significantly less. Perhaps two-thirds of the maximum or 82 divisions would represent a more realistic estimate.

COMBAT POWER RATIOS DURING ENVELOPMENT OPERATIONS

The perfect execution of this operation would involve no contact between the enveloping forces and the Pact forces. The enveloping force would occupy the isolated region between the rivers Oder and Vistula that, with bridges blown, have become barriers to Pact forces attempting to enter Poland from the East, or attempting to escape back to Russia from Germany. Needless to say, this is not likely to happen. Contact will be made and ground combat will ensue. The question has been consequently raised and addressed regarding the relative combat strengths of the opposing forces and their probability for defeating each other. To answer this question, the methodology developed by T. N. Dupuy⁴ was used. The data is summarized in Tables 7 through 12. First, the operational lethality index was calculated for both the Pact and US divisions and the benefit of surprise determined. (Table 7). The enveloping units listed on Table 8 were used to generate the total operational lethality index (OLI) for the US forces

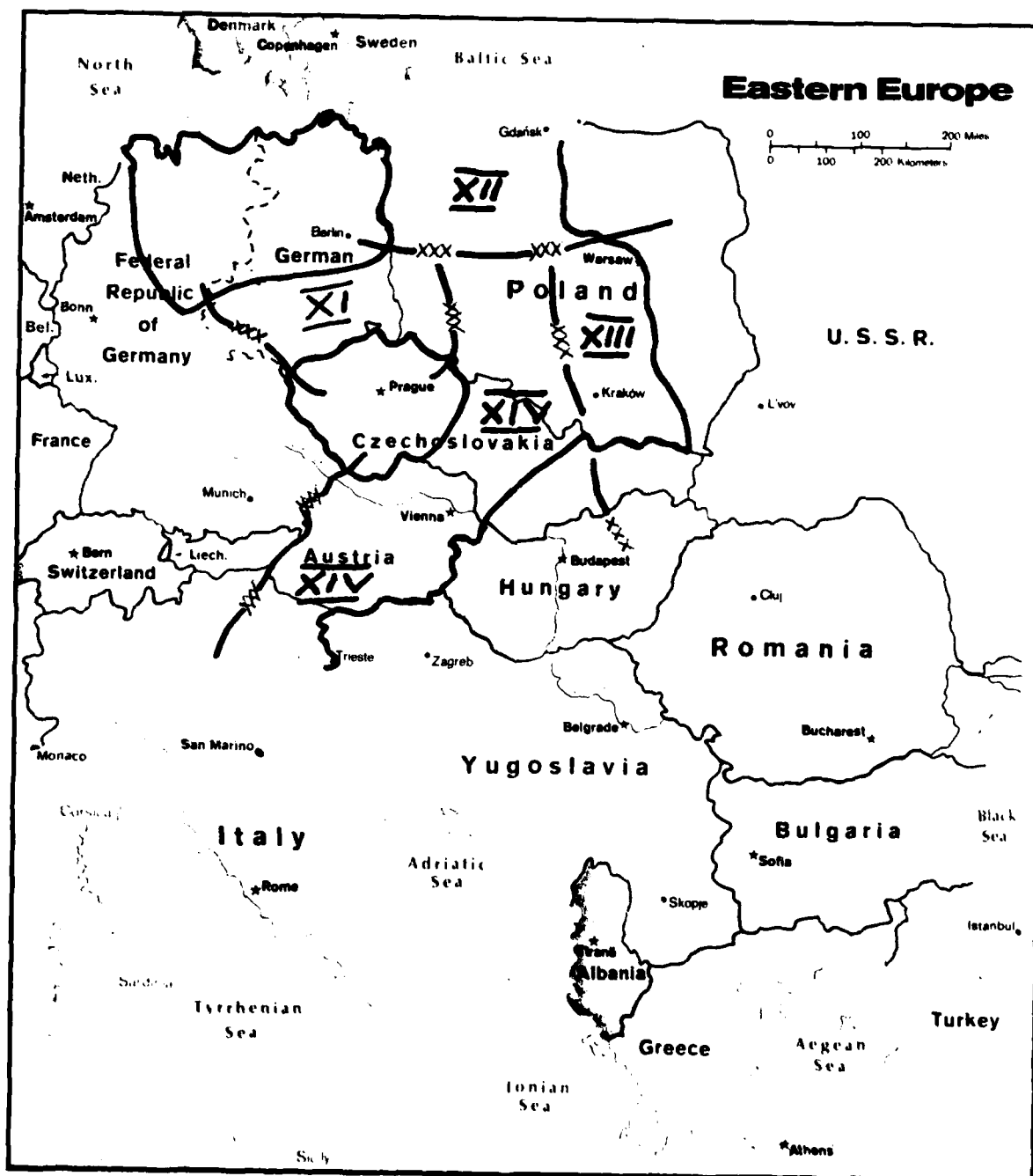


Figure 12. Corps Areas.

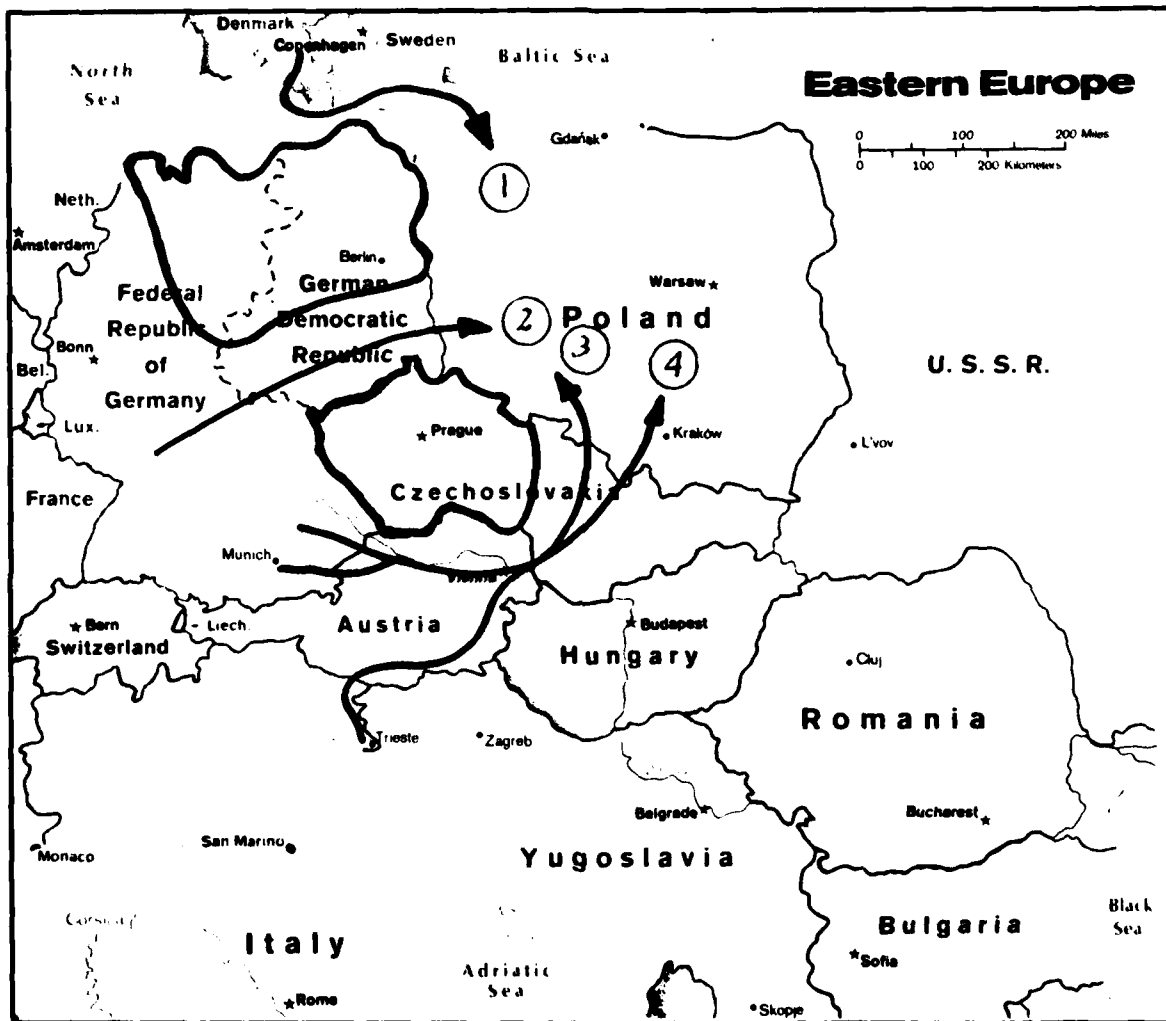


Figure 13. Poland will be served by three ground and one sea line of communications.

TABLE 6

MAXIMUM PACT FORCES EXPECTED TO BE DESTROYED OR CAPTURED

1. The North German Pocket

22 Soviet divisions (20 in E Germany, 2 in Poland)

66 Soviet divisions from the European USSR military districts

6 GDR divisions

15 Polish divisions (5 tk, 8 mr, 1 Abn, 1 amph assault)

109

2. The Czechoslovakian Pocket

5 Soviet divisions

10 Czechoslovakian divisions

15

TABLE 7

ASSUMPTIONS FOR QUANTIFIED JUDGEMENT METHOD OF ANALYSIS

1. National Force Effectiveness

Western Allies 3.5

Russians 2.5

Western Advantage $3.5/2.5 = 1.4$

2. Operational Lethality Index

2.1 US

2.1.1 Armd Div 387,463

2.1.2 Mech Div 347,959

2.1.3 ACR 51,308

2.1.4 Corps Troops 129,636

2.2 Russia

2.2.1 Tank Division 330,570

2.2.2 Motorized Rifle Div 249,615

2.2.3 Combined Arms Army Troops 323,518

3. Surprise

 $Msur = 5 \times 1.33 = 6.66, 4.77, 2.89, 1.0$ (Days 1, 2, 3 and 4) $Vsura = .4/1.33 = .3, .533, .766, 1.0$ (Days 1, 2, 3 and 4) $Vsurd = 3 \times 1.33 = 4.0, 3.0, 2.0, 1.0$ (Days 1, 2, 3 and 4)

4. The enveloping forces will have to fight 2/3 of Soviet divisions from European USSR Military Districts, Poland and Hungary (2/3 of 72 divisions).

5. No close air support will be available for US forces. The air assets will be used for air superiority in order to preclude Pact Air from interfering with US mobility (movement rates) in Austria, Central Czechoslovakia, northern Italy and Poland and for interdiction.

TABLE 8

MAJOR GROUND UNITS USED DURING THE OPERATION

1. Armored Divisions
 1. 2nd
 2. 1st Cav
2. Mechanized Divisions
 1. 4th
 2. 5th
 3. 1st
 4. 9th (converted to mechanized)
 5. 24th (converted to mechanized)
 6. A new US mechanized division or an existing NATO unit
 7. A new US mechanized division or an existing NATO unit
3. Infantry and Airmobile Divisions
 1. 7th
 2. 82nd
4. Separate Brigades
 1. Armored 194th
 2. Infantry 172nd, 197th
5. Separate Regiments
 1. 3rd Cav
6. Separate Arty Bn
 - 24 each
7. Separate Engineer Bn
 - 4 each

TABLE 9

COMBAT STRENGTH SUMMARY

<u>US Forces</u>	No. Div.	OLI	cev	Total OLI
Armored Divisions	2	387,463	1.4	1,084,896
Mech Divisions	7	347,959	1.4	3,409,998
Infantry Divisions	2	200,000	1.4	560,000
ACR-s	4	51,308	1.4	287,324
Corps Troops	4	129,636	1.4	725,962
				<u>6,065,180</u>

<u>Soviet Forces</u>				
Tank Divisions (European USSR=23, Poland=2, Hungary=2)	27	330,570	1.0	8,925,390
Motorized Rifle Divisions (European USSR=43, Hungary=2)	45	249,615	1.0	11,232,675
Combined Arms Army Troops	(14)	323,518	1.0	4,529,266
				<u>24,687,331</u>

TABLE 10

COMBAT POWER RATIOS

(With 2/3 of Soviet Reinforcements)

Day *	1	2	3	4
Surprise Factor (Vsurd)	4.0	3.0	2.0	1.0
Soviet OLI X 10^{-6}	16.46	16.46	16.46	16.46
US OLI X 10^{-6} X Vsurd	24.24	18.18	12.12	6.06
Pus / Ps	1.47	1.10	.74	.37

CONCLUSION: By the third day in Poland, the outcome will be decided.

* First day represents entry into Poland

TABLE 11

COMBAT POWER RATIOS

(With 1/3 of Soviet Reinforcements)

Day *	1	2	3	4
Surprise Factor (Vsurd)	4.0	3.0	2.0	1.0
Soviet OLI X 10^{-6}	8.23	8.23	8.23	8.23
US OLI X 10^{-6}	24.24	18.18	12.12	6.06
Pus / Ps	2.95	2.21	1.47	.74

CONCLUSION: By noon of the fourth day in Poland, the outcome will be decided.

* First day represents into Poland

TABLE 12

COMBAT POWER RATIOS

(with 1/10 of Soviet Reinforcements

plus Soviet forces in Poland and Hungary)

Day *	1	2	3	4
Surprise Factor (Vsurd)	4.0	3.0	2.0	1.0
Soviet OLI X 10^{-6}	6.19	6.19	6.19	6.19
US OLI X 10^{-6} X Vsurd	24.24	18.18	12.12	6.06
Pus / Ps	3.92	2.94	1.96	.99

CONCLUSION: The enveloping force can only encounter the Soviet divisions in Hungary and Poland and 10% of the reinforcements from the European USSR military districts without undue risk to the outcome of the operation.

* First day represents entry into Poland

and is shown on Table 9 together with Pact data. It was further assumed that the envelopment force would meet a maximum of $2/3$ of the Soviet divisions from Hungary, Poland, and the European Soviet military districts ($2/3$ of 72 divisions). The OLI-s of the Pact forces are related to the enveloping force OLI-s on Table 10 in terms of the combat power ratio of P_{US} to P_S , where the subscripts US and S stand for American and Soviet forces respectively. Note that the enveloping force has been credited with a surprise factor (advantage) that diminishes to 1.0 on the fourth day of the operation (the advantage is lost). The data in Fig. 10 indicates that the enveloping force will meet success on the first two days, even if the intelligence should be faulty and the campaign is launched just as the Pact second echelon forces are about to enter Poland. While the numbers indicate that the enveloping force would be defeated on the third or on any subsequent day, the situation is more promising than it appears. As was pointed out in the section entitled "The Envelopment", the ability to reach southern Poland on the first two days of the campaign will insure a degree of strategic success. Even in the face of adverse force ratios, the operation carries with it a high probability of spoiling the Pact strategic plans and objectives.

These ratios do highlight the importance of intelligence regarding the movement of Pact forces. Tables 11 and 12 present cases where improved intelligence would produce better timing. On Table 11 only one third of the Soviet reinforcements are encountered, while the fraction on Table 12 is $1/10$. The latter data indicates that with the judicious use of timely intelligence, the enveloping forces should be able to handle most situations in Poland.

ENVELOPING FORCE MOVEMENT RATES AND DISTANCES

The road distances⁵ covered by the operation are depicted in Tables 13 and 14 and are summarized in Figure 14. Note that the distance from Frankfurt to Wien is 711 km and from Trieste to Wien it is 552 km (for the purposes of this study, all forces POMCUS in FRG were assumed to start on D + 7 from Frankfurt; a conservative assumption). The longest distance is 1686 km and represents the road distance to be covered by the XII Corps from Frankfurt to the estuary of the Oder River at the northwest corner of Poland. At the same time, the distance required to reach the San River by the XIII Corps is about 1297 km.

The campaign is keyed to rapid advance rates. A survey was made of World War II rates in Poland (see Appendix 1), of the Russian experience in Manchuria⁶, and of the current Soviet doctrine^{7, 8, 9}. Finally, the data was adjusted to account for the improved range and reliability of the current tracked equipment over the World War II counterparts. The results are tabulated on Figure 15. Different rates have been used for different days. The high rates of the first three days (D + 7 through D + 9) reflect the element of surprise. Subsequent decreases in rates are caused by the expected stiffening of enemy resistance, while the slight increases in movement rates on later dates reflect the anticipated deterioration of control and fighting proficiency of the outflanked enemy.

The phase lines of the enveloping forces (based on the above rates) are shown in Figure 16. Note that the XII Corps reaches lower parts of the Oder on D + 12 and XI Corps should be ready to link up with NATO units at Fulda subsequent to D + 15.

TABLE 13

ROAD DISTANCES IN POLAND AND EAST GERMANY

(1)		Highway	km
1.1	Katowice		
1.2	Piotrkow	E16	146
1.3	Lodz	E16	47
1.4	Krosniewice	E16	58
1.5	Torun	E16	100
1.6	Chelmno	E16	53
1.7	Tczew	E16	96
1.8	Danzig	E16	34
		Total	534

(2)			
2.1	Katowice		
2.2	Piotrkow	E16	146
2.3	Warszawa	E82	146
		Total	292

(3)			
3.1	Krakow		
3.2	Skarzysko-Kamienna	E7	151
3.3	Warszawa	E7	142
		Total	293

(4)			
4.1	Katowice		
4.2	Piotrkow	E16	146
4.3	Lodz	E16	47
4.4	Krosniewice	E16	58
4.5	Poznan	E8	164
4.6	Schwiebus	E8	111
4.7	Frankfurt (a.O.)	E8	75
		Total	601

(5)			
5.1	Katowice		
5.2	Wroclaw	E22	188
5.3	Liegnitz	E22	61
5.4	Haynau	E22	36
5.5	Dresden	T22/6/E63/E15	160
5.6	Leipzig	E63/E62	114
		Total	559

(6)			
6.1	Danzig		
6.2	Stettin	?	353
		Total	353

(7)

7.1	Warszawa		
7.2	Wloclawek	E8/E16	202
7.3	Torun	E16	57
7.4	Bydgoszcz	?	51
7.5	Deutsch-Krane	T81	116
7.6	Stettin	T81	<u>151</u>
		Total	577

(8)

8.1	Border		
8.2	Katowice	E16	86
		other road	104

(9)

9.1	Katowice		
9.2	Opole	E22	102

(10)

10.1	Border (Ostrava)		
10.2	Opole	242	117

(11)

11.1	Border (Cukmant)		
11.2	Wroclaw	/E22	94

(12)

12.1	Border		
12.2	Krakow	E7	148

(13)

13.1	Katowice		
13.2	Piotrkow	E16	146
13.3	Lodz	E16	47
13.4	Krosniewice	E16	58
13.5	Torun	E16	100
13.6	Bydgoszcz	?	51
13.7	Deutsch-Krane	T81	116
13.8	Stettin	T81	<u>151</u>
		Total	669

TABLE 14

ROAD DISTANCES
IN
GERMANY, AUSTRIA, ITALY, AND CZECHOSLOVAKIA

	Highway	km
14 Germany		
14.1 Frankfurt-Würzburg	A7	116
14.2 Würzburg-Münchberg	A7	108
14.3 Nürnberg-Regensburg	A7	104
14.4 Regensburg-Passau	E5	<u>121</u>
		449
15 Austria (North)		
15.1 Passau-Linz {Engenhartszell	130, E5	(73)
{Schärding	E5	105
15.2 Linz-St. Pölten	E5	106
15.3 St. Pölten-Wien	E5	<u>51</u>
		262
16 Austria (Northeast)		
16.1 Wien-Eichenbrunn-Laa-border		65
16.2 Wien-Mistelbach-border @ Breclau		75
16.3 Wien-Ganserndorf-border @ Malacky		56
17 Austria (Southeast) and Italy		
17.1 Wien-Wiener Neustadt	A9	53
17.2 Wiener Neustadt-Leoben	E7	~100
17.3 Leoben-Scheifling	E7	39
17.4 Scheifling-Klofenfurt	E7	71
17.5 Klofenfurt-Villach		~40
17.6 Villach-Udine		~119
17.7 Udine-Trieste		<u>~30</u>
		152
18 Czechoslovakia		
18.1 Breclava-Uherske		~24
18.2 Uherske-Prerov		~37
18.3 Prerov-Ostrava		~92
18.4 Ostrava-border		<u>~12</u>
		~171

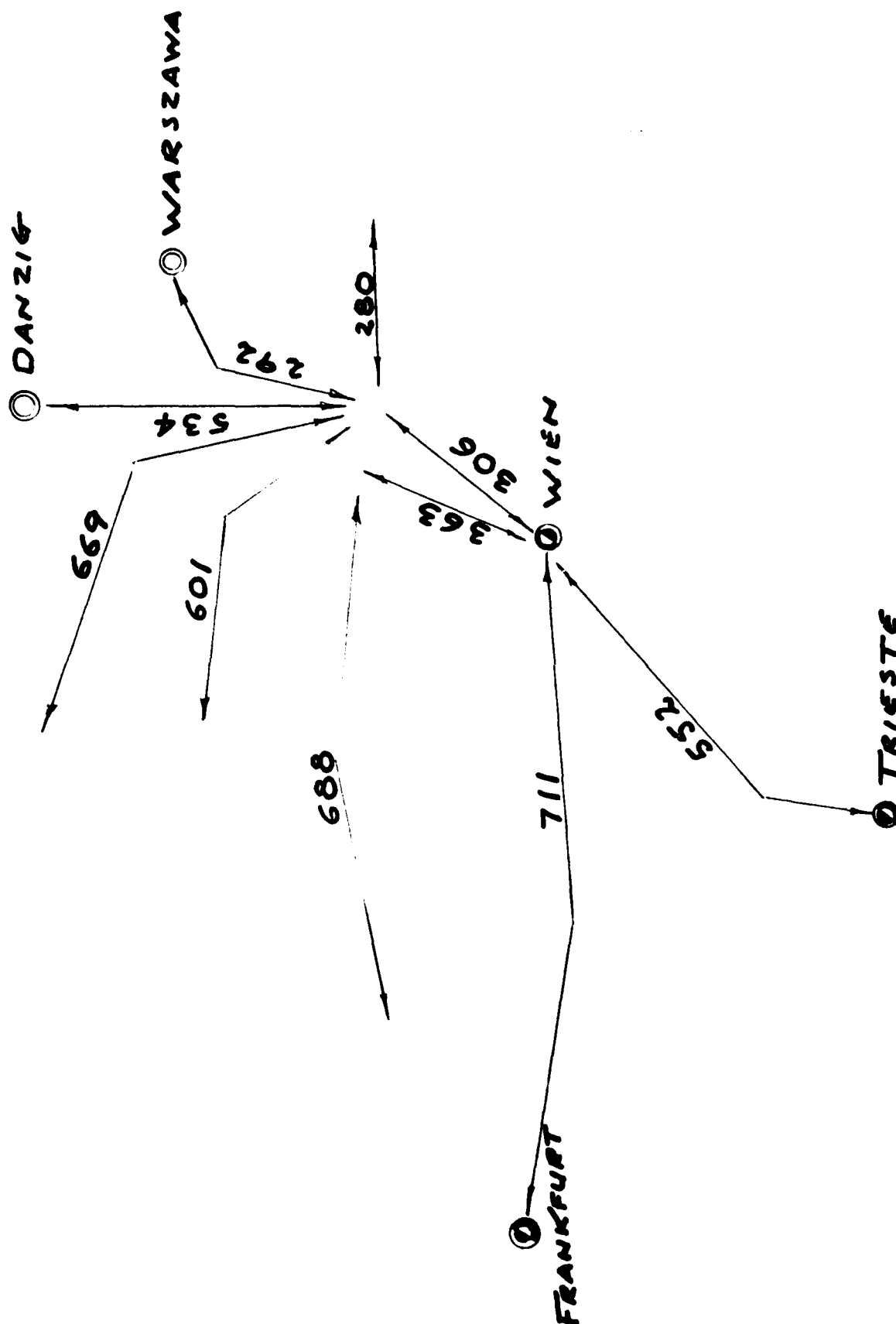
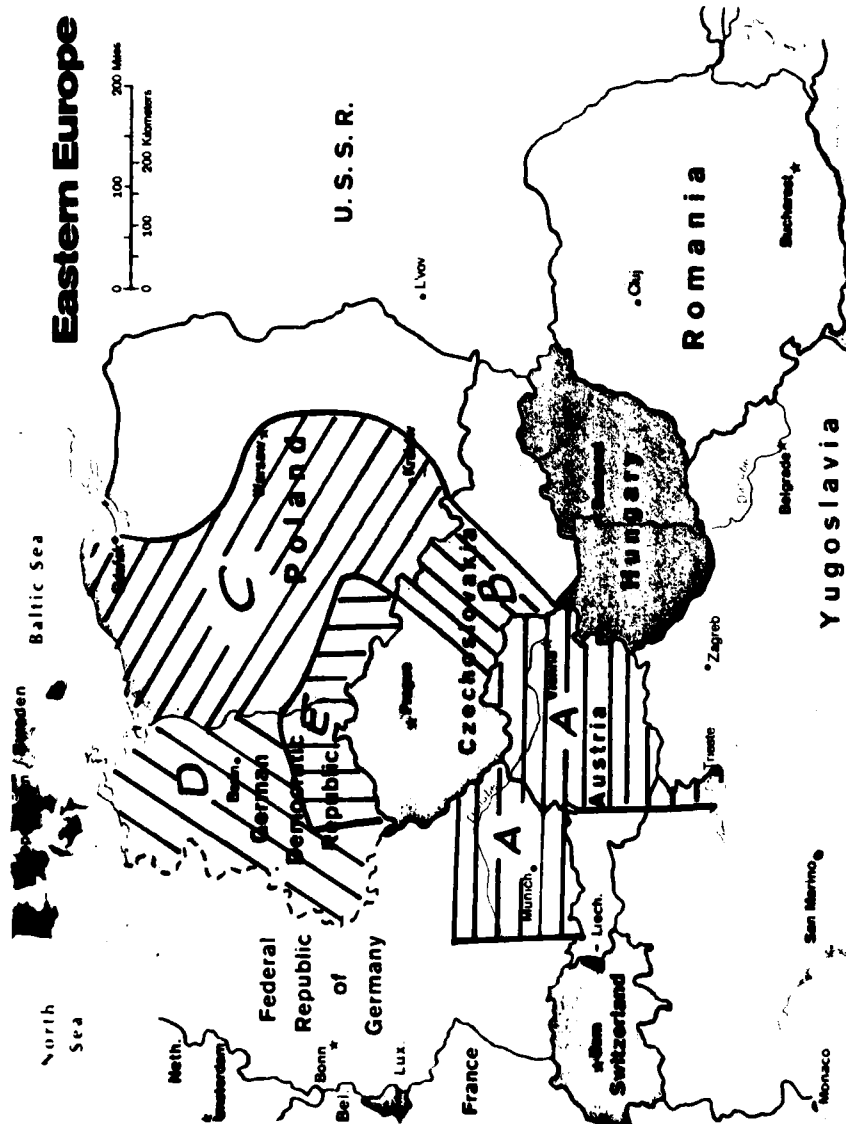


Figure 14. Major road distances (not to scale).



DAY 0 +

REGION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
B	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
C	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
D	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Figure 15 Mobility Regions



Figure 16. The campaign will last 15 days.

A major area of concern has been the lengths of the convoys of the combat units of the four corps, their vulnerability to air attack, and the time to clear the Polish border. A survey of the units involved indicates that a total of over 42,000 vehicles¹⁰ (Table 15) will be moving through Austria and Czechoslovakia on three separate roads (two along the Donau River and one from Trieste). Based on a spacing of 100 feet per vehicle (with no allowance for spacing between units), we have three convoys¹¹ of 430 km (267 mi.). At 25 mph, these convoys will clear the Polish border in about 11 hours. The attractiveness of these convoys to Pact tactical air is obvious and their vulnerability to air interdiction is unquestionable. Consequently, the requirement for virtually absolute allied air superiority over the corridors of envelopment is self evident.

GROUND LOGISTICS

One key question that was addressed during the study was the adequacy of the logistical lines of communications to support the campaign. This question was treated in two parts. First, the transportation capacity of roads and railroads was determined. Then the daily tonnages required to support the operation were calculated and compared to the transportation capacity.

Three transportation modes are available to support this campaign: road, rail and barge. Although barge traffic on the Donau River could carry significant military tonnages from southern Germany to Wien, this mode of transportation was excluded in the calculation of the transportation system capacity. The vulnerability of the waterway to blockage by sunken barges, ships, or to mining was the primary reason for the decision. This

TABLE 15

CONVOY SUMMARY

CORPS	NUMBER OF VEHICLES	LENGTH OF CONVOY * km
XI	17,481	534.1
XII	9,472	289.2
XIII	9,073	277.0
XIV **	6,149	187.8
Total	42,175	1,288.1

- * 1. Excluding intervals between units
 2. Based on 100 ft. per vehicle

** Excluding 92nd Airborne and the ABN TF from Northern Italy

is not to say that the waterway should not be used if and when available, and when it can satisfy the logistical demands in a timely fashion.

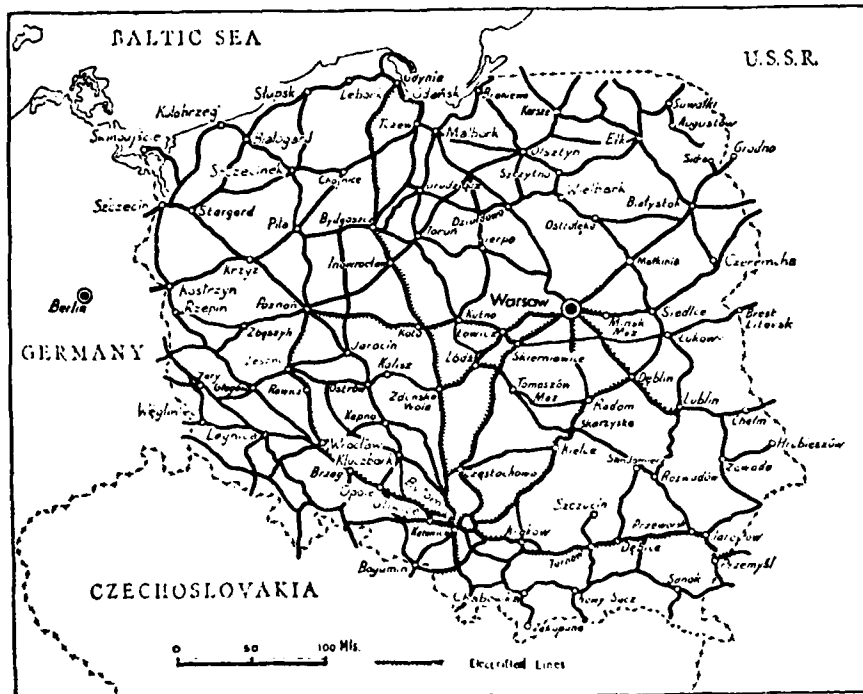
The rail capacity of the area of operation is treated in Appendix 2. Basically there are two rail lines available from southern Germany to Wien (See Fig. 17). The first is a double track electrified line with a daily capacity of 30 trains per day or 15,000 tons. The second line is north of the Donau River and is single track with a capacity of 10 trains per day or 5,000 tons.

The rail line from Trieste to Wien is also electrified double track except a short 80 km single track section south of the Austrian border. For the purposes of this study, the line was also rated at a 15,000 ton daily capacity.

The railroads in central Czechoslovakia (Fig. 18) that link Wien to southern Poland consist of a multitude of tracks: one candidate is the double track line that runs from Wien to Hradiste-Ostrava. A second double track line connects Wien to Breclav-Brno-Abreh, from where several single track lines connect with the network in Poland. Consequently, the railroad capacity through central Czechoslovakia is considered to be 30 KT per day (2 X 15KT).

Poland has an excellent rail network (Fig. 17). No attempt was made to determine rail capacity to the various corps areas. It is a reasonable assumption that all tonnages that reach Poland through the Austrian and Czechoslovakian rail network can be absorbed by the Polish rail capacity. Consequently, it has been concluded that the railroad capacity to Wien is 35 KT per day, and from Wien to Poland, 30 KT per day. (See Table 16)

POLAND



AUSTRIA

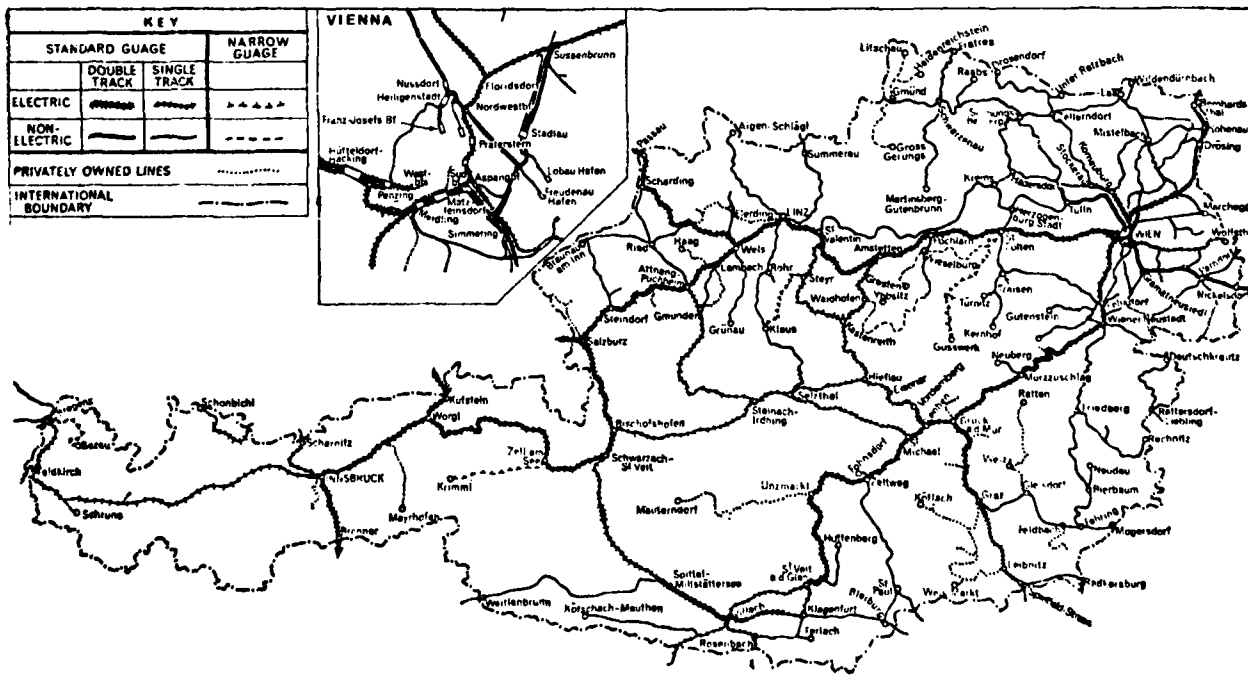


Figure 17. Railroads in Poland and Austria



————— Railroad

Figure 18. Rail networks in central Czechoslovakia.

TABLE 16

CAPACITY OF THE LOGISTICAL LINES OF COMMUNICATION

SEGMENT	Railroad Capacity KT/day	Road Capacity KT/day	Total Capacity KT/day
West Germany to Wien	20	108	128
Trieste to Wien	15	36	51
Wien to Poland	30	108	138

The rail gages in Poland, Czechoslovakia, Austria, Italy and Germany are identical. Consequently, no reloading of trains will be necessary. At the same time, the electrification systems differ between these nations. This means that when electric locomotives are used, the equipment must be switched on some border crossing points.

The corresponding highway capacity is 72 KT and consists of the following major roads. On the south shore of the Donau River is one Autobahn (E14) that connects Salzburg to Wien (Fig. 19). This Autobahn is paralleled by a paved secondary road. The combined capacity¹² is estimated as 8 KT per day (54KT + 27KT). The north shore of the Donau River between Wien and Linz, is paralleled by numerous paved roads. An excellent highway (E5) connects Linz to West Germany. The capacity of this network is estimated as a minimum 27 KT per day. The road network from Trieste to Wien consists of two excellent highways between Wien and Villach. South of Villach, a single paved road is available for 82 km, and then it becomes Autobahn quality to Trieste. Because of this one 82 km bottleneck, the highway from Trieste to Wien is rated only as 36 KT per day.

The road network through central Czechoslovakia consists of a minimum of three paved two-lane highways (See Fig. 19) with a total capacity of 108 KT per day. These three communication lines (with connecting highway numbers in parenthesis) are listed below:

1. Wien (49) Breclav (E15,55) Hodonin (55) Prerov (47) Lipnik (E7) Cieszyn.
2. Wien (E7, AB) Brno (E7) Olomouc (46) Opava; or (?) to Ostrava.
3. Wien (E84) Znojmo (54) Pohorelice (52) Brno (43) Svitavy (43/old E12) Lanskroun (old E12) Kraliky; or (35,44) Sumperk (44) Mikulovice.



Figure 19. Key roads and highways in Austria and Czechoslovakia.

Because of the extensive Polish road network, no analysis was undertaken. Again it was assumed that any road tonnages that can be delivered through Czechoslovakian road nets can be distributed in Poland.

A review of the transportation system capacity (Table 16) indicates that the roads and railroads in central Czechoslovakia will define the maximum tonnages that can be delivered to Poland. While it is possible to deliver a total of 179 KT (128 KT + 51 KT) per day to Wien, only 138 KT per day can be delivered from Wien to Poland. It must be also expected that part of this rail and road capacity will be damaged during the campaign. For this study, it was assumed that the operable transportation network would never be less than 50 percent, or 69 KT per day to Poland.

The fuel consumption calculations for the campaign were based on the methodology of FM 101-10-1, July 1976. First, the data in Tables 3-16 through 3-21 of the reference were used to define the POL consumption per km for every unit in the campaign and then for every corps identified in Table 5. The POL consumption rates per corps were then multiplied by the road distances of Figure 14. The total POL consumption was subsequently calculated according to the rules of Chapter 3, Section III of FM 101-10-1.

1. Add 10% to consumption rates for round trips to bring up supplies and fuel (use half of traveled distance).
2. Add 10% for losses.
3. Add 16 km per day for each vehicle for administrative moves.
4. To estimate consumption of aviation gasoline, assume helicopter travels at 100 mph.
5. Average weight for all POL is 6.99 lbs./gal.
6. Travel in Poland consists of 50% road and 50% cross country.

7. All other (stationary) equipment is operated 10 hours per day, 7 days per week.

The results of these calculations are summarized in the first column of Table 17 and indicate that 81.78 KT of POL will be required to execute the nine day four corps operation. The XI Corps leads the POL consumption with 29.36 KT while XIV Corps consumes only 7.63 KT. It should be emphasized that the POL data is applicable only for the units as outlined in Table 5 and does not include other CSS or CS units.

The ammunition expenditures were likewise based on the FM 101-10-1 (Section 7-7 and Table 7-3). For all operations, the consumption rates applicable for protracted combat were used. Again, the rates were calculated for all units and summed by corps. For the first two days the ammunition expenditure in Austria and Czechoslovakia was assumed to be negligible. Also, the rates were reduced for each corps to reflect their combat posture or the fact that they were expected to make extensive moves, and consequently would consume ammunition at reduced rates.

CORPS	Class V consumption reduced to reflect nature of operations
XI	90%
XII	80%
XIII	80%
XIV	40%

The total Class V expenditures are summarized in the second column of Table 17 and again show that the XI Corps is expected to be the heavy consumer with 87.26 KT for the nine day period. The total Class V requirements are 213.07 KT.

In recognition of the US Army experience that ammunition and fuel will constitute a major share of the supply tonnages for a highly mobile

TABLE 17

LOGISTICAL SUPPORT

Corps	Days	1 Class III	2 Class V	3 Other *
II	D+7/D+8	12.35	0	0
	D+9/D+15	17.01	87.26	10.4
XII	D+7/D+8	10.4	0	0
	D+9/D+15	19.9	65.1	8.5
XIII	D+7/D+8	5.20	0	0
	D+9/D+15	9.29	43.57	5.3
XIV	D+7/D+8	3.49	0	0
	D+9/D+15	4.14	17.14	2.1
TOTAL		81.78	213.07	26.3

* Assume 10% for all other classes of supply. First two days of Class I carried by units.

envelopment operation, no detailed calculations were made for the Classes I, II, IV, VI, VII, VIII, or IX. It was simply assumed that these classes will constitute about 10 percent¹³ of the sum of the estimated Class III and V tonnages. The results of this approximation are listed in Column 3 of Table 17.

It was indicated earlier in this section that the expected road and rail capacity to Poland is about 69 KT per day under wartime conditions. This number must be compared to the total supply requirements of 321.15 KT ($81.78 + 213.07 + 26.3$) of Table 17. This translates to an average daily requirement of 36.68 KT and is well within the 69 KT transportation system limit. However, there is one caveat. The supply tonnages of Table 17 do not include the Air Force requirements. The fuel, ammunition and ground support equipment necessary to operate the US Tactical Air from Austria and from the captured airfields in Czechoslovakia and Poland must be transported over the same rail and highway network. Although these tonnages have not been calculated, they cannot exceed 32.32 KT per day ($69KT - 35.68KT$).

The tonnages on the summary table 17 have been equated to trains¹⁴ and truck companies.¹⁵ If all supplies are moved by train, a total of 643 trains (at 500 tons per train) or 72 trains per day would be required. This exceeds the capacity of two double track railroads by about 6 KT per day. To move all supplies by truck would require 74 medium truck companies. A trucking unit, TOE 55-18H with 75 percent availability and equipped with 40 foot trailers can move 1125 tons per haul. If the average hauling distance is such that a round trip takes two days, the daily capacity per company becomes 562.5 tons. The total tonnage for D + 9 through D + 15

is 289.71 KT in 7 days, or 41.39 KT per day which would require 73.5 or 74 medium truck companies.

The logistical analysis of the ground campaign can be summarized as follows:

1. The maximum possible supply tonnage that can be made available to the operation in Poland is dictated by the road and rail capacities in central Czechoslovakia.

2. When all supplies move by truck, a total of 74 medium truck companies will be required. While it should be possible to move most of the tonnages by rail, the operation should not be started without at least 50 medium truck companies.

3. Although the logistics, as defined here, are adequate to support the campaign, another logistical line of communications must be established at the earliest possible time to the units that are at the extreme ends of the LOC's. To alleviate the potential problems that can develop with extremely long LOC's, an amphibious linkup has been planned with the units in northern Poland (See Chapter IX).

CHAPTER VI

FOOTNOTES

1. David C. Jones, United States Military Posture for FY 1980, pp 5-6.
2. Donald B. Vought and J. R. Angolia, "The United States Army", in The US War Machine, ed. by Ray Bonds, pp. 68-85.
3. The International Institute for Strategic Studies, The Military Balance 1979-1980, pp. 9-16.
4. T. N. Dupuy, Numbers, Predictions and War, pp. 165, 172, 174, 201, 231.
5. Europe Road Atlas, pp. 8-9, 50-55.
6. Dupuy, p. 16.
7. A. A. Sidorenko, The Offensive, pp. 11, 73.
8. V. D. Sokolovskiy, Soviet Military Strategy, p. 125.
9. US Department of the Army, Soviet Army Operations, pp. 3-61 to 3-129.
10. US Department of the Army, Staff Officers' Field Manual Organizational, Technical and Logistic Data (U), FM 101-10-1, pp. 2-120 to 2-278, (hereafter referred to as FM 101-10-1).
11. US Department of the Army, Army Motor Transport Operations, FM 55-30, pp. 9-13.
12. Ibid., pp. 9-12.
13. FM 101-10-1, pp. 3-4.
14. Ibid., pp. 4-15 and 4-16.
15. Ibid., pp. 4-12.

CHAPTER VII

ALTERNATE NATO STRATEGY, THE AIR WAR

A special Air Force Headquarters will be organized to plan and execute the air war in support of the land campaign (See Chapter V). The air assets for this headquarters will be drawn from United States Air Forces Europe (USAFE), Tactical Air command (TAC), Air National Guard (ANG), and USAF Reserves (USAFR). Upon conclusion of the campaign, the air units will revert to the control of 4th Allied Tactical Air Force (ATAF).

While the objective of the land campaign is to avoid combat with the major Pact ground units and to capture them by a deep envelopment, the objective of the Air Force is directly the opposite. Tactical air will seek out the Pact Air Force in the air and on the ground and destroy it during a series of deliberate and aggressive missions. In addition, it will interdict enemy lines of communications, especially bridging over major rivers, and destroy Pact mechanized units and equipment.

The land campaign is predicated on surprise and very rapid movement of large ground units. This rapid movement is only possible when the Pact air is not allowed to interfere with the operation. Consequently, the top priority mission for tactical air is to insure air superiority over the Allied axes of advance during the first two days of the operation. The second priority mission is to protect the flanks of the enveloping forces by interdicting bridging on the major rivers (Oder and Vistula) and the destruction of enemy units threatening the flanks. The third priority missions include the destruction of Soviet forces in Hungary, Pact

tactical (floating) bridging equipment, interdiction of Pact attempts to evacuate their forces by the Baltic Sea, establishment of air lines of communication (ALOC) to Poland, the mining and bombing of Pact ports on the Baltic coast, and the establishment of air superiority over the Baltic prior to and during the amphibious operation on D + 13.

The air war to be waged is predicated on a number of assumptions tabulated in Table 18. Basically, it is assumed that the Pact air will deploy and operate in the year 1983 according to the tactics in effect in 1980, and that although they will continue to modernize, their numerical strength will not change significantly. The NATO and US Air Forces are also expected to retain their current numerical force levels.

The NATO air war in Central Region, Europe will consist of three campaigns (Fig. 20). The first involves the massing of NATO air in the central region in order to contain the Pact attack (D to D + 6). The second phase involves the massing of US air assets over southern Germany, Austria, central Czechoslovakia, and Poland in order to insure air superiority over the enveloping forces (D + 7 to D + 12). The final phase includes the establishment of air superiority over the Baltic in support of the amphibious operation on D + 12 and the repulsion of potential Pact counterattacks in eastern Poland.

THE BALANCE OF PACT AND NATO AIR FORCES IN CENTRAL REGION ON D-DAY

The NATO assets available to wage air war in the Central Region are shown in Table 19. All nations with responsibilities in the area are expected to have all their resources committed, except Canada, who will hold back half of her assets for continental defense. France, expected

TABLE 18

AIR WAR ASSUMPTIONS

1. PACT Tactical Air Forces will attack on D-Day in "classic three wave" assaults at selected points along the central front. Their objectives will be:
 - a. Punch corridors through SAM belt
 - b. Attack CCC
 - c. Attack Allied RADAR sites
 - d. Attack Allied airfields
2. By D-Day 1983 WRM Inventory will be sufficient in Central Region for US operations through D+45 and for Allied operations through D+20.
3. US Air Assets in Spain will deploy to FRG.
4. The NATO success or failure is not dependent upon roles played by SAC heavy bombers or USSR long range aviation.
5. SAC tanker support will be available in Central Region.
6. Austrian airfields will be available for operations.

AIR WAR ASSUMPTIONS CONTINUED

7. US Tactical Airlift will be diverted to support the operation beginning on D+7. They will be used to:
 - a. Initiate tactical operations from captured airfields.
 - b. Support ground operations where necessary.
8. Sustained operations from captured airfields will be supported by rail and truck transport.
9. Most of the PACT rotary wing threat will be located on the north central region on FEBA. Any rotary wing threat on the Austrian/Czechoslovakian area will be countered by organic Army ADA units.
10. One half of Polish tactical air assets will be used in support of northern front operations.
11. Ten USAF fighter squadrons will arrive in Denmark by D+10 to augment NORTHAG forces in the campaign against the Poles.
12. US Naval Air will be available in the Baltic by D+12.

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NINE DAYS TO ODER: AN ALTERNATE NATO STRATEGY FOR CENTRAL REGIO--ETC(U)
JUN 80 P W HANDLEY, A KAREMAA, R A ROBERGE

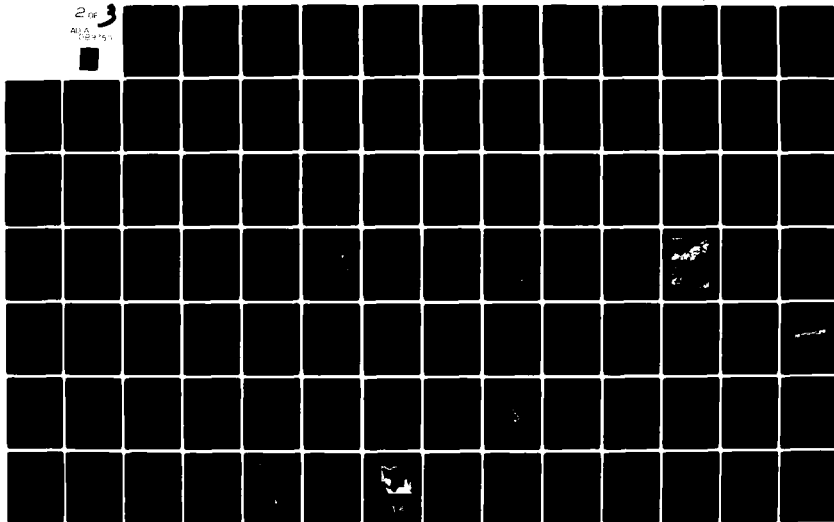
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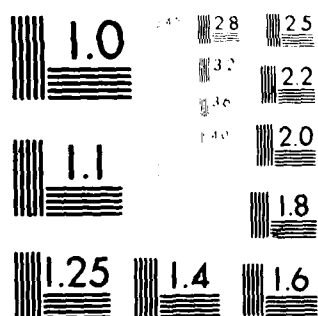
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MICROCOPY RESOLUTION TEST CHART
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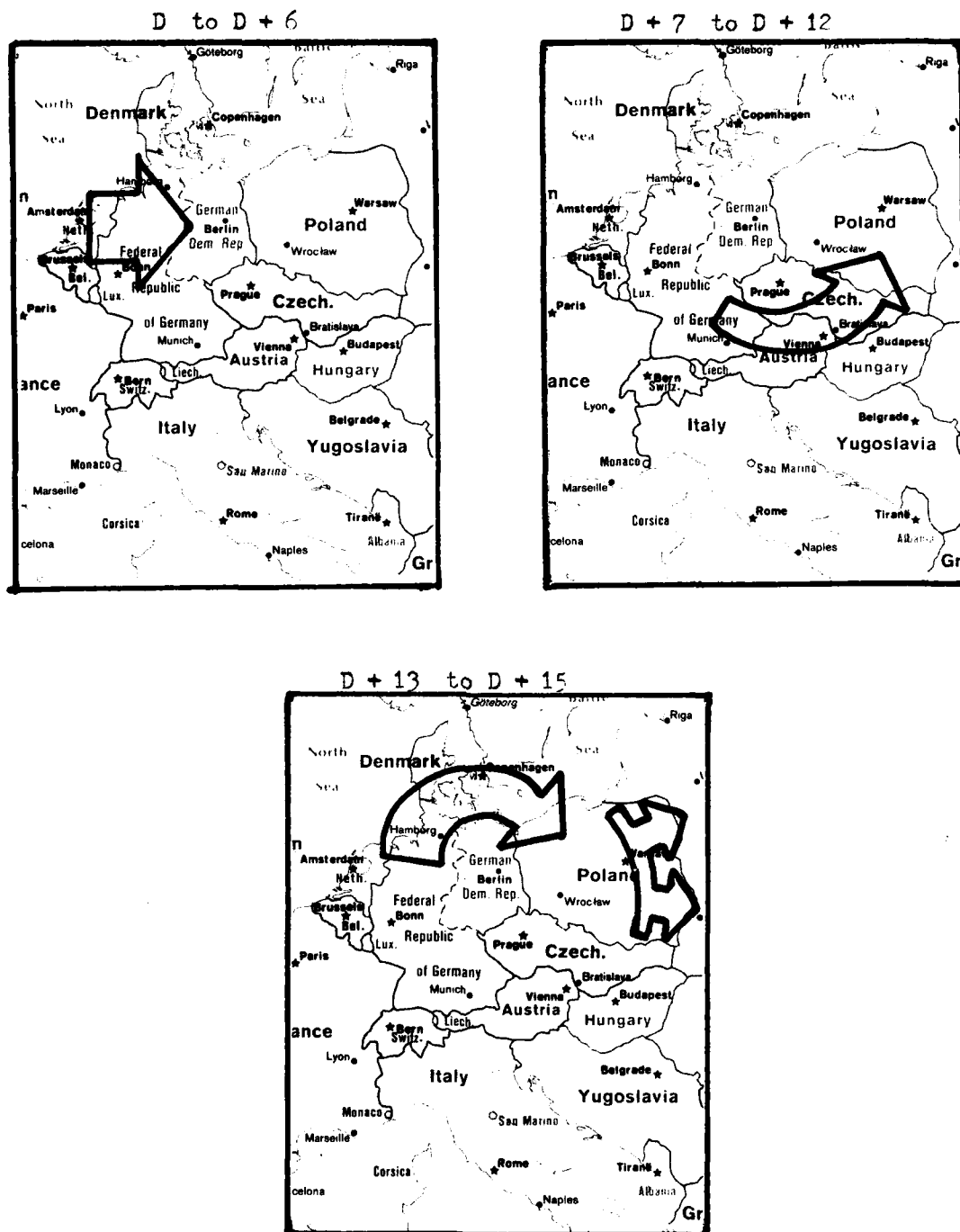


Figure 20. The NATO Air War in Central Region, Europe, will consist of three campaigns.

TABLE 19

NATO TACTICAL AIR ASSETS ONCENTRAL FRONT (D-DAY)

United States	788 of 788	
United Kingdom	540 of 540	
Belgium	150 of 150	
Canada	107 of 214	
Germany	480 of 480	
Netherlands	170 of 170	
* France	477 of 477	
Denmark	0 of 113	
Greece	0 of 259	
Italy	0 of 311	
Norway	0 of 119	
Portugal	0 of 24	
Turkey	0 of 303	
	<u>2712 of 3841</u>	
TOTAL		2712 of 3841

* France will enter war on D + 3.

to join NATO on D + 3, will contribute 477 aircraft. Consequently, a total of 2235 NATO aircraft will be available, or 2712 if we include the French forces. The balance of NATO air assets, or 1129 aircraft (3841-2712) will be protecting the NATO flanks.

The distribution of US air assets is shown in Table 20. The first column represents the 788 aircraft in place in Europe, while the second column indicates aircraft available for augmentation. Of the 110 squadrons available, 60 will be used for augmentation as shown on Table 21. All will be available for combat in Europe on D + 10.

The Pact air assets are summarized on Table 22 and indicate that the Pact will start the war with 1941 aircraft on D Day. The Hungarian Air Force is retained for the defense of Hungary, while half of the Polish Air Force is expected to participate in the Pact attack, primarily on the northern front. Half of the Soviet aircraft in Poland and Hungary will deploy forward and fly combat missions in the Central Region. A total of 1000 Soviet aircraft is expected to reinforce the Pact forces between D + 3 and D + 5.

The distribution of NATO and Pact aircraft by countries is shown on Figure 21. The data in parenthesis indicates Soviet aircraft. Figure 22 indicates the approximate location of most of the air bases that will be used for the air war. The air campaign will be launched from southern German air bases, but will shift to Austria on the first day (D + 7). As soon as the Allied units reach the city of Wien, the forward air operations will be transferred to the three airports surrounding the city.

It is estimated that the airports in Czechoslovakia and Poland become operational one day after they are occupied by ground forces. The Austrian

TABLE 20

USAF AIR ASSETS, JULY 1983

A/C	IN PLACE	AVAILABLE AUGMENTATION	
		Aircraft	Squadrons
F-111	156	282	10
F-4	90	960	34
A-10	192	479	17
F-15	90	450	16
F-5	20	55	2
A-7	0	233	8
F-4G	24	48	2
RF-4	72	387	14
F-105	0	149	5
F-16	144	312	11
F-105F	0	24	1
	<hr/>	<hr/>	<hr/>
TOTAL	788 (33 squadrons)	2874	110

TABLE 21

USAF AUGMENTATION AIR ASSETS

Closure by D + 10²

Squadrons	Aircraft
5	RF-4
7	F-111
12	F-4
15	A-10
9	F-15
4	A-7
2	F-4G
6	F-16
<hr/>	
TOTAL 60	

TABLE 22

PACT AIR ASSETS ON

CENTRAL FRONT (D-DAY)

GDR	335 of 335
Czechoslovakia	462 of 462
Hungary	0 of 150
* Poland	0 of 679
USSR in GDR	748 of 748
USSR in Czechoslovakia	102 of 102
USSR in Poland	**196 of 298
USSR in Hungary	** <u>98 of 196</u>
TOTAL	1941 of 2970

* Half of Poland's 679 A/C force will deploy to northern front.

**Will deploy forward to Czechoslovakia and GDR.

(USSR will reinforce central front with 1000 A/C during period D + 3 - D + 5)

CAN 107
UK 540

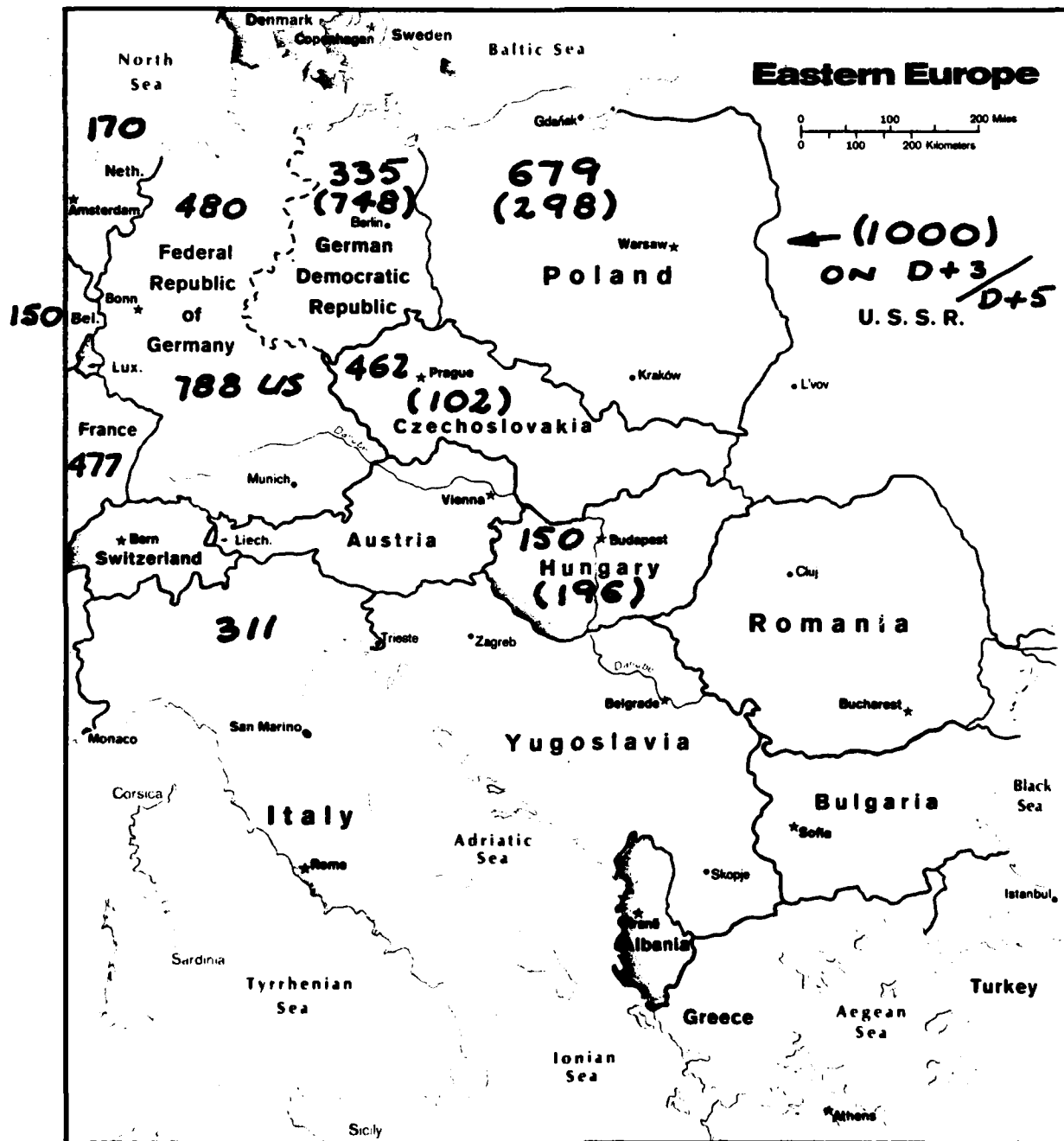


Figure 21 . NATO and Pact air assets on Central Front, D-Day.



Figure 22. Airfields in FRG, Austria, Poland and Czechoslovakia which will be used to support the NATO Air Operations.

fields will be captured intact and will be ready for limited operations immediately upon the arrival of the Air Force units. Inter-theater tactical air transport aircraft will be used to activate the captured fields. They will fly in the initial load of ammunition, fuel, and ground support equipment. Follow-on supplies will be brought by truck and rail transport. The captured airfields are organized as air heads and support fields. The air heads are indicated by asterisks on Table 23.

THE AIR WAR OVER GERMANY

The discussion of the air war over Germany prior to the envelopment operation (D + 7) would be outside the scope of this paper. However, we have addressed it in a very cursory manner because of the following considerations:

1. The air losses during the first week will determine how many US assets will be able to support the envelopment operation and how many Pact assets will be available to oppose it.

2. A determination must be made as to whether the massing of NATO air on the southern flank on D + 7 will not unduly weaken the NATO air over central Germany and subject it to defeat in detail.

To address these two issues, an estimate was made of NATO assets (less US) on central region through D + 10 (Table 24). The average sortie rate for the total forces (both Allied and Pact air) was assumed to be 2.0. A loss ratio of 6% was used on the first day which tapered to 1% on D + 10. This rate reflects the fact that most NATO operations in the early days will be defensive and flown mostly over friendly territory, and that NATO pilots hold the edge in training and equipment. A similar

TABLE 23

NATO TAC AIRFIELDS IN AUSTRIA, CZECHOSLOVAKIA AND POLAND

	Day Liberated D +	Day Available for Operations D +
1. Austria		
Linz (2)	7	7
Tulln	7	7
Vienna		
* Deutsch/Wagram	8	8
* Wien Schwechat	8	8
* Astern		
2. Czechoslovakia		
Brno	8	9
Uherske Hradiste	8	9
* Mosnov	8	9
Zabreh	8	9
3. Poland (West)		
Zendek	8	9
Kamien Slaski	9	9
Brzeg	8	9
*Olesnica	8	9
Gadow	8	9
Legnica	9	10
Osla	10	11
Szarnotawa	10	11
Zagan	10	11
4. Poland (Central)		
* Krzesiny	10	11
Powidz	10	11
Bydgoszcz	10	11
Borsk	12	13
Gdansk	12	13
Gdynia	13	14
Lebien	13	14
5. Poland (East)		
Lask	9	10
Leznica Wielka	9	10
Pielice	10	11
Glinnik-Nowy	9	10
* Boernerowo	10	11
* Okecie	10	11

* Air Heads

	Day Liberated D +	Day Available for Operations D +
6. Poland (Southeast)		
Balice	8	9
Jasionka	10	11
Sadkow	9	10
7. Poland (Northwest)		
Slupsk	13	14
* Kolobrzeg	13	14
Sniatowo	13	14
Goleniow	13	14
Chojna	13	14
Wilzze Laski	12	13

TABLE 24

NATO AIR ASSETSCENTRAL FRONT

(NETHERLANDS, BELGIUM, FRG, UK, CANADA, FRANCE*)

	D + 0	D + 1	D + 2	D + 3	D + 4	D + 5	D + 6	D + 7	D + 8	D + 9	D + 10
1. AOB at start of day	1447	1273	1171	1077	1489	1400	1358	1304	1590	1542	1511
2. Sortie Rate	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
3. Total Sorties	2894	2546	2342	2155	2978	2800	2716	2608	3180	3084	3022
4. Loss Rate	6%	4%	4%	3%	3%	3%	2%	1.5%	1.5%	1%	1%
5. Aircraft Lost	174	102	94	65	89	42	54	39	48	31	30
6. Reinforcements	0	0	0	0	*477	0	0	**325	0	0	0
7. AOB at end of day	1273	1171	1077	1489	1400	1358	1304	1590	1542	1511	1481

* France enters the war on D + 3

** US assets remaining on Central Front

table (Table 25) has been prepared for US Tactical air assets. During the first week they will be operating in an integrated mode with other NATO allies. The sortie and loss rates are consequently identical.

It is of interest that at the end of D + 6, or prior to the start of the envelopment operation, 1304 NATO aircraft will be available (Table 24), plus an additional 1293 US aircraft (Table 25) for a total of 2597. Between D + 5 and D + 7, 75 percent of US aircraft will be transferred to the operational control of the new Air Force headquarters to support the ground campaign. The question then is how can we expect the NATO force of 1304 aircraft to perform in respect to the Pact forces on the central front.

To answer this question, a projection was made regarding the Pact Air Order of Battle. This data (Table 26) shows a sortie rate of 2.0 and an initial loss rate of 25% which drops to 3% on the third day. This loss rate projection is based on the following considerations:

1. The Pact air will be attacking the full strength of the most formidable air defenses ever assembled.
2. The Pact air plans call for attack in mass through NATO SAM belts of improved Hawk and Patriot.
3. The Pact pilots who succeed in penetrating the SAM belts will be operating in unfamiliar territory and will be met by the full strength of Allied interceptors in a NATO free fire zone.
4. Pact equipment, especially ECM and fire control systems are inferior to comparable NATO systems.
5. Command and control of Pact fighters is based on the leader concept. Once the flight leaders are shot down, the flights will become disorganized and easy targets for NATO fighters.

TABLE 25

US AIR ASSETSCENTRAL FRONT

1. AOB at start of day
2. Sortie Rate
3. Total Sorties
4. Loss Rate
5. Aircraft Lost
6. Reinforcements
7. AOB at end of day

D + 0	D + 1	D + 2	D + 3	D + 4	D + 5	D + 6
788	818	878	934	1004	1070	1179
2.0	2.0	2.0	2.0	2.0	0.5	0.5
1598	1636	1757	1867	2008	535	590
6%	4%	4%	3%	3%	3%	2%
96	65	70	56	60	16	12
126	126	126	126	126	126	126
818	878	934	1004	1070	1179	1293

TABLE 26

PACT AIR ASSETSCENTRAL FRONT

	D + 0	D + 1	D + 2	D + 3	D + 4	D + 5	D + 6	D + 7	D + 8	D + 9	D + 10
1. AOB at start of day	1898	949	712	627	922	1200	1463	1173*	957**	825***	775
1.1 Soviet	1101	550	412	363	674	967	1243	1022*	815**	691***	650
1.2 GDR	335	168	126	111	104	98	92	86	82	77	72
1.3 Czechoslovakia	462	231	173	152	143	134	126	63*	60	56	53
2. Sortie Rate	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
3. Total Sorties	3796	1898	1424	1254	1844	2400	2924	2346	1914	1650	1550
4. Loss Rate	25%	12.5%	6%	3%	3%	3%	3%	3%	3%	3%	3%
5. Aircraft Lost	949	237	85	38	55	72	88	70	57	50	46
6. Reinforcements	0	0	0	333	333	334	0	0	0	0	0
7. AOB at end of day	949	712	627	922	1200	1462	1374	1103	900	775	728
7.1 Soviet	550	412	363	674	967	1243	1168	961	766	650	611
7.2 GDR	168	126	111	104	98	92	86	82	77	72	68
7.3 Czechoslovakia	231	173	152	143	134	126	118	60	56	53	50

* 201 A/C shifted to oppose counter offensive

** 146 A/C shifted to oppose counter offensive

*** 75 A/C shifted to oppose counter offensive

Starting on D + 7, Pact forces will most likely begin to shift air assets south to oppose the NATO envelopment. A total of 201 aircraft are expected to be transferred on D + 7, 146 on D + 8, and 75 on D + 9. After this point in time, some Soviet aircraft could conceivably be ferried to the Soviet Union to avoid capture or entrapment in the pockets. Since it is difficult to visualize Pact air operations past D + 10, the data in Table 26 has been terminated at that point.

The relationship of NATO and Pact air power over the central region is summarized in Figure 23. The data does not include the US aircraft (75%) that has been transferred to support the envelopment operation. (The Pact resources are shown also with a loss rate that is one half of the projected rate for the first two days.) The data clearly indicates that the NATO air will overpower Pact after "D" Day. Even if Pact should be able to operate with loss rates that are one half the projected rates, they will achieve a numerical superiority over NATO forces only during the D + 5 to D + 12 period. In either case, the NATO forces will be able to handle Pact air in the central region. The US air assets to be transferred to support the envelopment are indicated in Table 27.

THE AIR CAMPAIGN IN SUPPORT OF THE ENVELOPMENT OPERATION

The air war in the central region will consist of three campaigns (Fig. 20). During each campaign, certain missions are critical to the success of the ground war.

During the first campaign (D to D + 6), the task of the Allied Tactical Air Force will be to isolate the central and west sections of Poland that are located between the Vistula and Oder Rivers. This is to

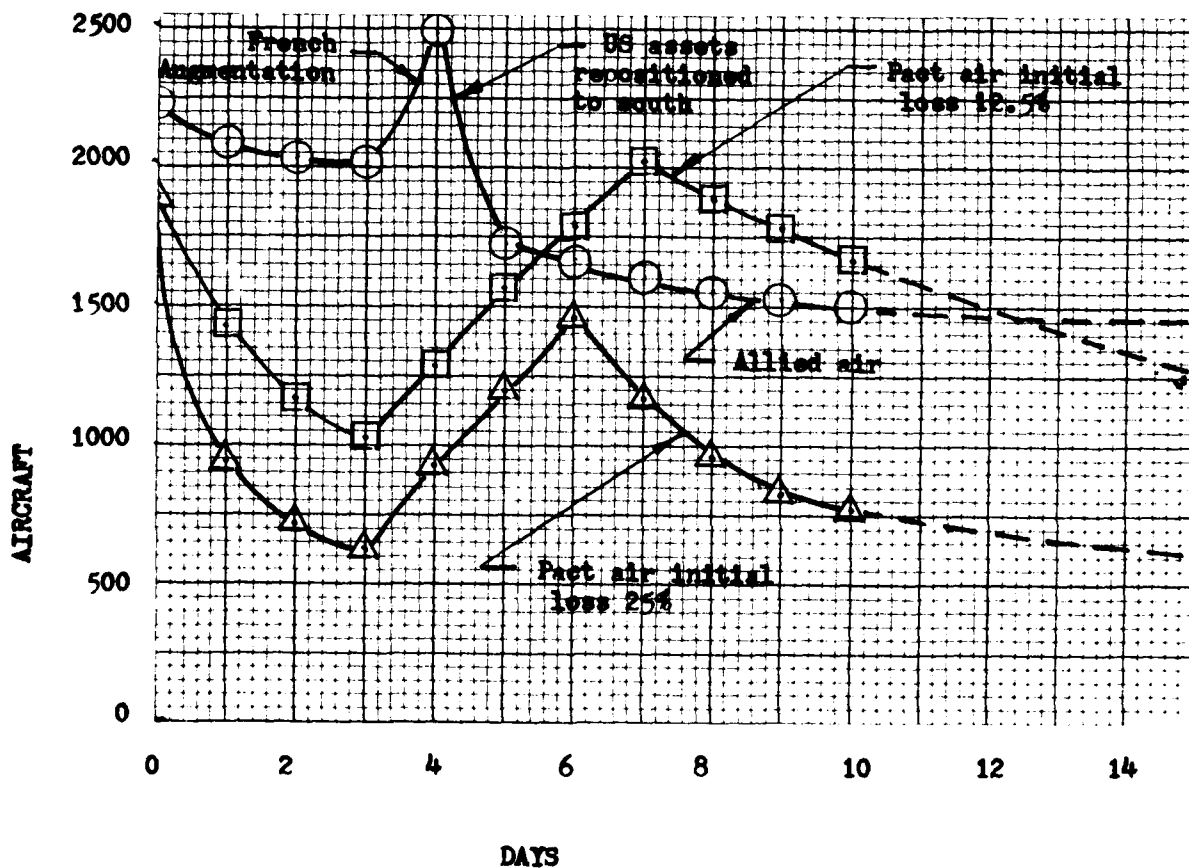


Figure 23. Central Front Air Order of Battle.

TABLE 27

US TAC AIR SWINGING TO ENVELOPMENT FRONT

ON D + 5 - D + 6

100% F-111 (UK)

90% F-4

25% A-10

75% F-15

100% F-5

100% A-7

75% F-4G

50% RF-4

75% F-16

=75% of remaining US air
assets (968 aircraft)

be accomplished by the destruction of bridges and ferries on the two rivers and by the interdiction of Pact shipping on the southern Baltic Sea. During the second air campaign, starting on D + 7, the mission is to insure air superiority over the routes of invasion, especially during the first two days of the operation. The objective is to allow unimpeded movement of the invading forces in southern FRG, Austria, northern Italy, and central Czechoslovakia. During the third campaign, starting on D + 13, the critical missions are to assist with the security of the right flank, to establish air lines of communications (ALOC) to central Poland, and to assist with the amphibious operation into northern Poland on D + 13. The latter is executed in order to activate a seaborne line of communications (SLOC) into Poland. The purpose of both lines of communication is to supplement the long ground logistical lines to the XI and XII corps areas in northern and central Poland.

Of the three missions, the air superiority during the first two days (D + 7 and D + 8) represents the most critical requirement. Anything other than minor interruptions by Pact air of the invading tactical columns will cause the operation to fail during the opening phase. The successful interdiction of the Vistula and Oder Rivers and the establishment of the SLOC and ALOC will insure the timely completion of the Polish campaign and the entrapment of the Pact forces in GDR. Failure to accomplish these missions will lead to excessive losses in ground forces and to the total or partial failure of the operation.

These three ATAF missions are expanded in Table 28. In addition, lower priority missions are listed. Note that the order of listing indicates the mission priority for each phase.

TABLE 28. ATAF MISSIONS

- Note: 1. Missions listed in order of priority for each phase.
2. Missions in support of combat operations in central and northern portion of FRG are not listed.
3. D + 1 represents the first day of invasion by Pact forces.

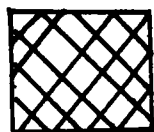
PHASE	TIME SPAN	MISSIONS AND CONSTRAINTS
I	D + 1 / D + 6	<ol style="list-style-type: none"> 1. Destroy Pact bridging equipment in Czechoslovakia, Poland, and GDR. Destroy crossings on Vistula (Wisla) River north of San River (about 30 crossings). Destroy crossings on the Oder River (About <u> </u> crossings) north of Breslau (Wroclaw). Do not destroy bridges at Torun (Vistula) and at Kostrzyn (Oder). 2. Insure air superiority over Adriatic Sea. 3. Destroy the mobility and combat assets of Russian divisions <u> </u> in Hungary (four), and in central and western Poland (two). 4. Assist with bombing and <u> </u> mining of Pact military ports <u> </u> if necessary. 5. Do not damage the road and rail system in central Czechoslovakia and in SW Poland.
II	D + 7/D + 8	<ol style="list-style-type: none"> 1. Insure air superiority over: <ol style="list-style-type: none"> 1.1 southern FRG 1.2 central and eastern Austria 1.3 central Czechoslovakia 1.4 northeast Italy 1.5 south central Poland 2. Destroy bridges at Torun (Vistula) and Kostrzyn (Oder). Also mine rivers. 3. Interdict road and rail movement in: <ol style="list-style-type: none"> 3.1 western and eastern Czechoslovakia 3.2 southern Poland 4. Interdict road and rail movement in W. Hungary. Insure air superiority over Adriatic 5. Do not interdict road and rail network in SW Poland

III	D + 9/ D + 12	<ol style="list-style-type: none"> 1. Insure air superiority in: <ol style="list-style-type: none"> 1.1 southern FRG 1.2 central and eastern Austria 1.3 northeastern Italy 1.4 central Czechoslovakia 1.5 Poland, west of Vistula River 2. Interdict road traffic in: <ol style="list-style-type: none"> 2.1 northern Poland 2.2 southern Poland (east bank of Vistula and San Rivers) 2.3 southern GDR 2.4 eastern Czechoslovakia 2.5 western Hungary 3. Preclude evacuation of Pact forces through Baltic. Destroy/interdict northern German ports. Destroy bridges at Stalsund.
IV	D + 13/ D + 15	<ol style="list-style-type: none"> 1. Insure air superiority over the southern Baltic Sea and northern Poland (west of Vistula River). Establish ALOC to XI and XII Army corps in Poland. 2. Support amphibious landing on the north coast of Poland. 3. Maintain air superiority over: <ol style="list-style-type: none"> 3.1 Poland, west of Vistula River 3.2 central Czechoslovakia 3.3 central and eastern Austria 3.4 southern FRG 3.5 northeastern Italy 4. Interdict road and rail traffic and lines of communication in: <ol style="list-style-type: none"> 4.1 eastern Poland (East of Vistula and San Rivers) 4.2 northern GDR 4.3 eastern Czechoslovakia 4.4 western Czechoslovakia 4.5 western Hungary 5. Preclude evacuation of Pact forces through Baltic.
V	D + 16/	<ol style="list-style-type: none"> 1. Point in ALOC to northern Poland if necessary. 2. Maintain air superiority over Poland and pockets. 3. Interdict traffic: <ol style="list-style-type: none"> 3.1 east of Vistula River 3.2 east of San River 3.3 east Czechoslovakia 3.4 Hungary 3.5 northern GDR and northeastern FRG

The development of the various phases of the air war is depicted in Figures 24 through 26, 28 and 29. The phases correspond to the numbers on Table 28. The following codes are used:



Regions where air superiority is required.



Areas where ground or sea communications are to be interdicted.

Solid black lines in Figure 24 indicate rivers with destroyed crossings. The total number of crossings to be destroyed is 67 (28 on the Vistula and 39 on the Oder River). Tables 29 and 30 identify the sites³ to be destroyed. The data is summarized in Table 31.

The destruction of the bridges will be accomplished by F-111's equipped with Pave Spike Pods and MK-84 laser guided bombs (LGB's). The operation will start on the evening of D + 6 (assuming the Soviet second echelon has moved through Poland). The F-111 aircraft will stage out of RAF Upper Heyford and RAF Lakenheath. They will operate at night and in flights of two. One aircraft will have the Pave Spike Pod on the center line; the other will carry two MK-84 LGBs. Based on a 4% attrition rate for D to D + 6 period, 196 F-111's will be available on D + 6 with the 134 F-111's (268 sorties), they will attack again if necessary on D + 7 with an identical force. The 134 of the 196 available F-111's will fly two sorties each on D + 6 and D + 7. A 3.5% attrition rate is expected for these operations. The mission profile will be high-low-high with 18 KC-135 tankers used both nights. Tanker's tracks will be over the Austrian



Figure 24. Air War Phase I (D to D + 6).

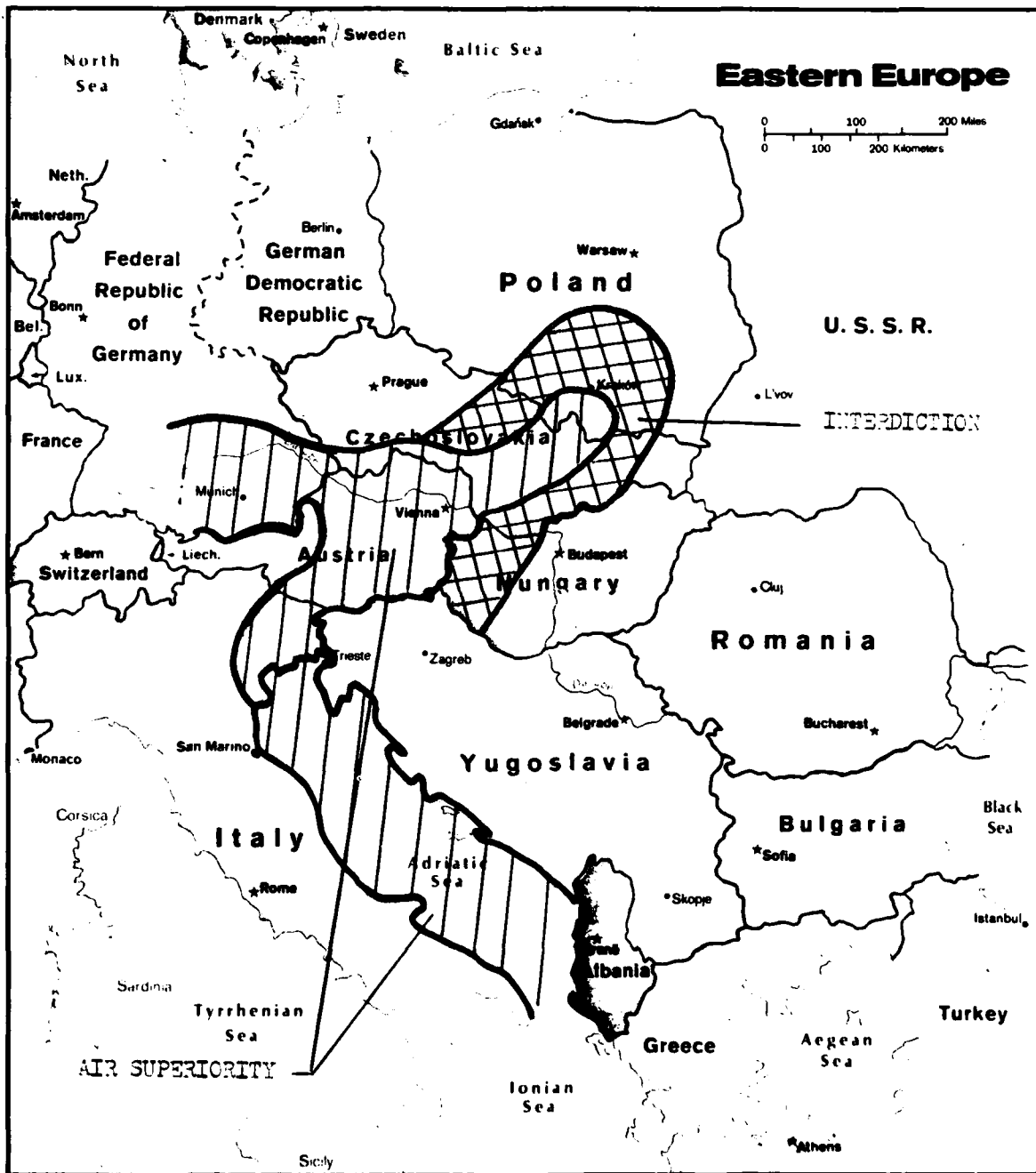


Figure 25. Air War Phase II (D + 7 to D + 9).

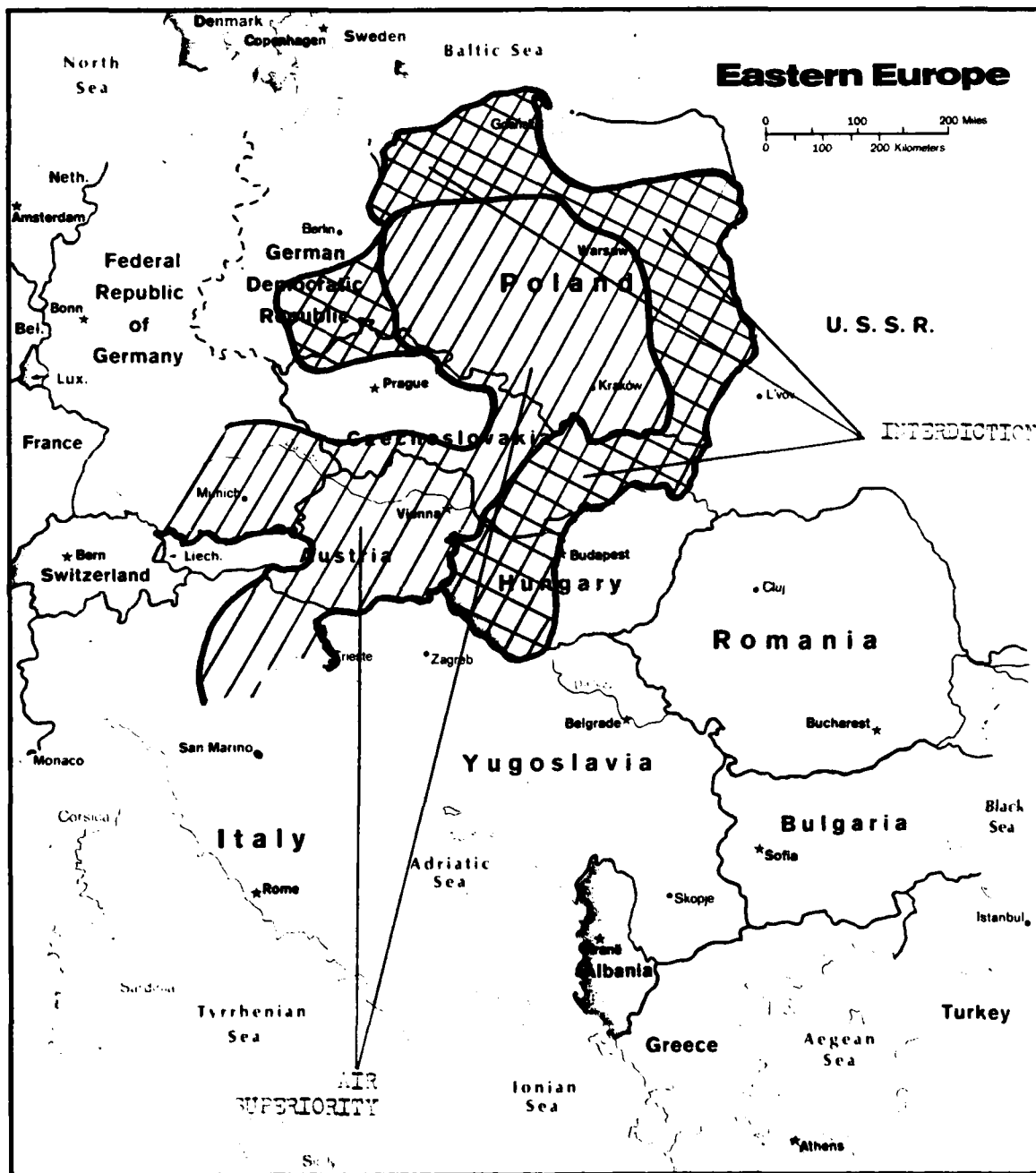


Figure 26. Air War Phase III (D + 9 to D + 10).

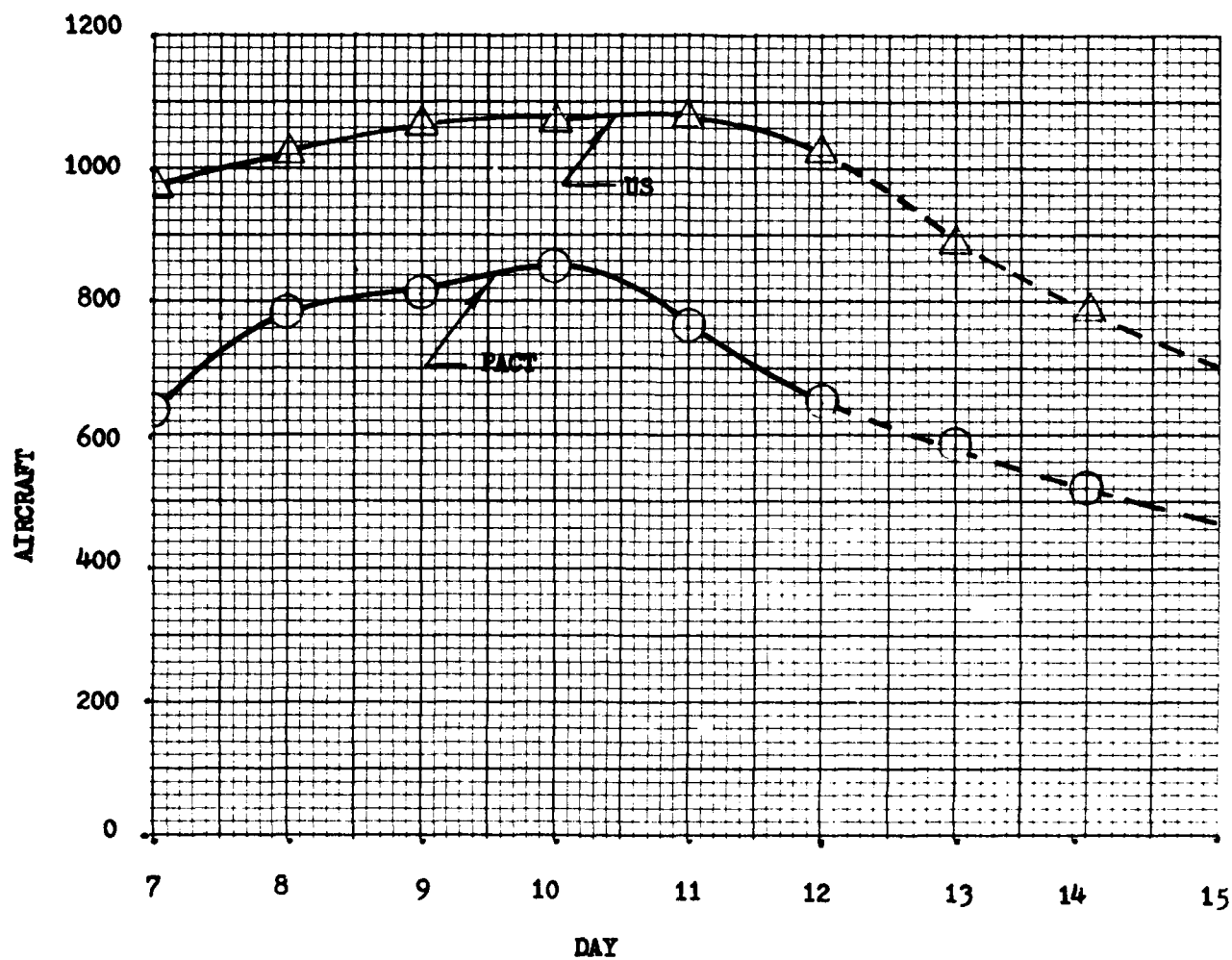


Figure 27. Envelopment Front Air Order of Battle.

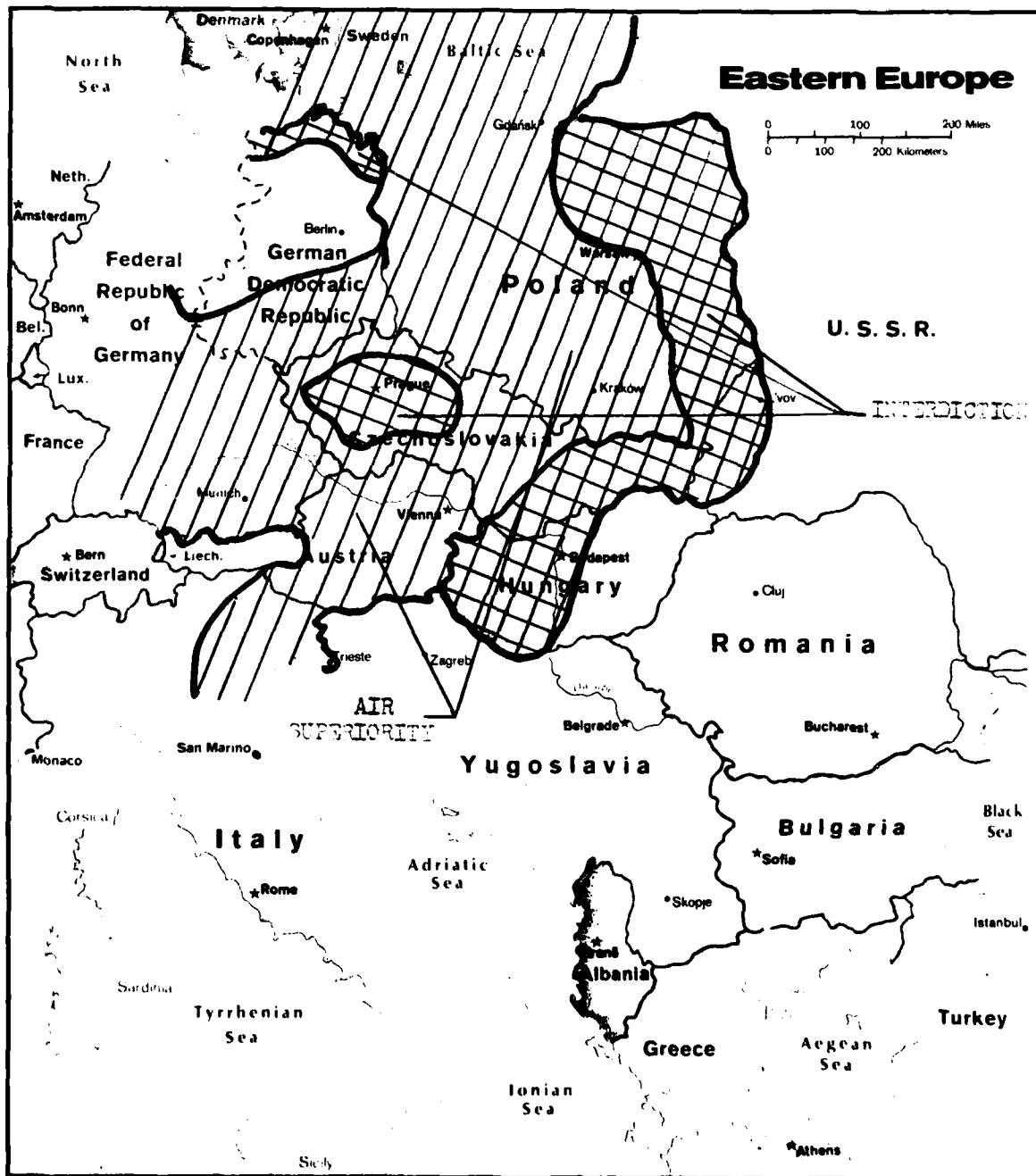


Figure 28. Air War Phase I (D + 13 to D + 15).

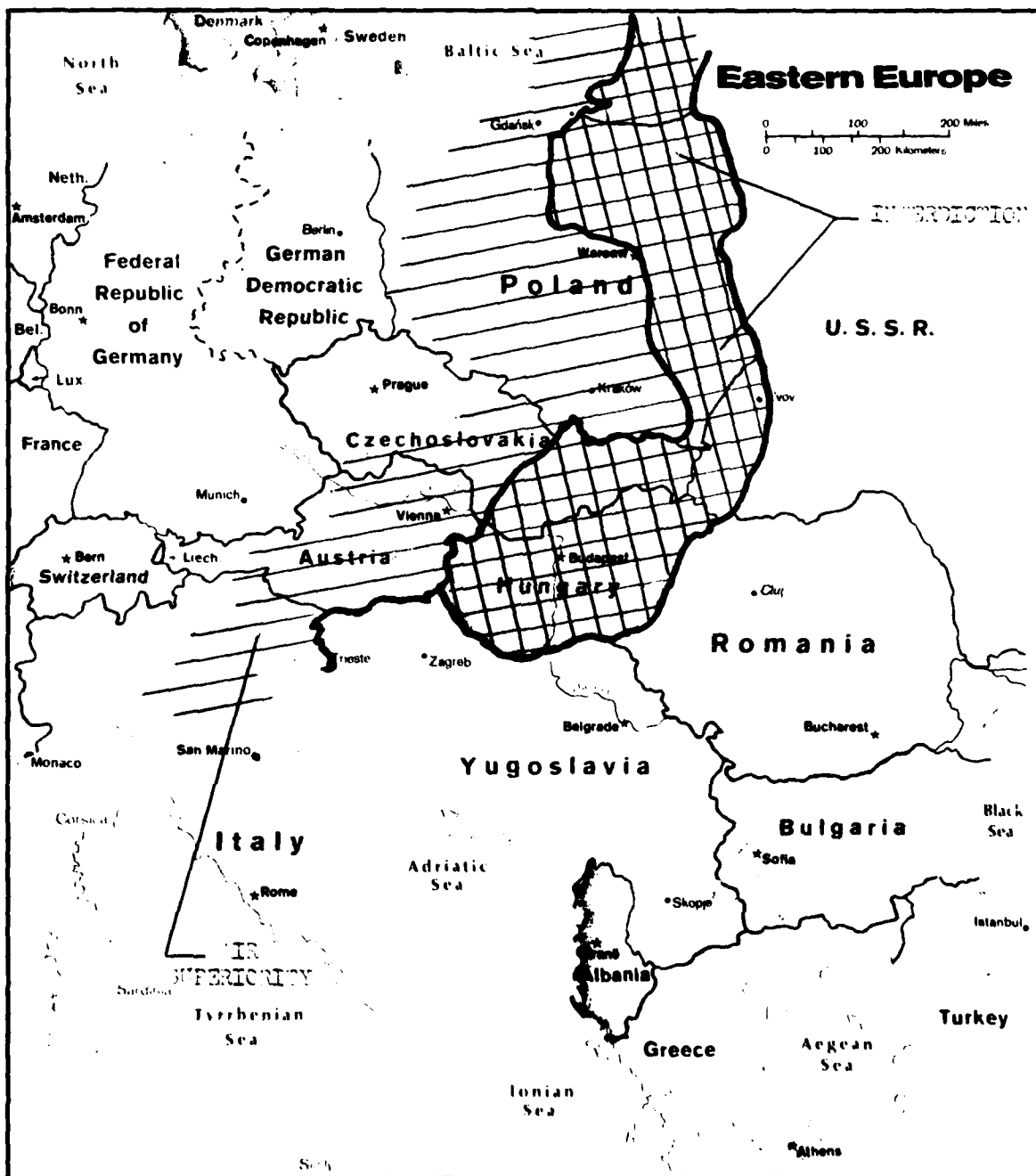


Figure 29. Air War Phase (D + 16 and 1 to 10).

Table 29
Oder River Crossings

1. Bridges, Road

- 1.1 Szczecin (E and W) 104
- 1.2 Kalbaskowa (E and W) AB, E-74
- 1.3 Gryfino (E and W) 113
- 1.4 Schwedt (E and W) 166
- 1.5 Bad Frieenwalde, 158
- 1.6 Gustebiese
- 1.7 Kienitz
- 1.8 Kostrzyn, 1
- 1.9 Frankfurt (a.O.) 42, 5, 112, 87
- 1.10 Frankfurt (a.O.) South, AB
- 1.11 Furstenberg
- 1.12 Chlebow
- 1.13 Krosno, 42, 97
- 1.14 Zielona Gora North, 157
- 1.15 Zielona Gora East
- 1.16 Nowa Sol, 42
- 1.17 Glogow, 122
- 1.18 Chobienia
- 1.19 Scinawa, 117
- 1.20 Prochowice

2. Bridges, Railroads

- 2.1 Szczecin North (2E and 1W) (Double)
- 2.2 Szczecin South (E and W) (Double)
- 2.3 Kostrzyn (Double)
- 2.4 Frankfurt (a.O.) (Double)
- 2.5 Szerwiesk West (Single)
- 2.6 Szerwiesk East (Single)
- 2.7 Nowa Sol North (Single)
- 2.8 Glogow East (Double)
- 2.9 Glogow (Single)
- 2.10 Scinawa (Double)

3. Ferries

- 3.1 Swinoujscie (Hw)
- 3.2 Swinoujscie (RR Single)
- 3.3 Szczecin Police/ Swieta (Hw)

Note: 1. AB - autobahn
2. Numbers designate highways served by bridge

Table 30
Wisla - Vistula Crossings

1. Bridges, Road

- 1.1 Tczew (Hw + RR, multiple)
- 1.2 Tczew (South 4 km)
- 1.3 Gniew
- 1.4 Nowe
- 1.5 Grudziada (1 + ?)
- 1.6 Chelmno
- 1.7 Bydgoszcz (Hw + RR (Single))
- 1.8 Torun (1 + ?)
- 1.9 Nieszawa
- 1.10 Wloclawek
- 1.11 Plock
- 1.12 Nowy Dwor Mazowiecki
- 1.13 Warszawa
- 1.14 Gora Kalwaria
- 1.15 Pulawy North
- 1.16 Pulawy
- 1.17 Krasnik West

2. Bridges, Railroads

- 2.1 Kwidzyn (Single)
- 2.2 Grudziada (?)
- 2.3 Torun (Multiple ?)
- 2.4 Plock (Single)
- 2.5 Warszawa (2) Multiple)
- 2.6 Gora Kalwaria (Multiple ?)
- 2.7 Pulawy North (Multiple ?)

3. Ferries

- 3.1 Komary (Hw + RR ?)
- 3.2 Drewnica
- 3.3 Kiertzmark
- 3.4 Ostaszewo
- 3.5 Stebcewo

TABLE 31
SUMMARY OF RIVER CROSSINGS

Vistula Crossings (North* of San River)

1. Highway Bridges: 15
2. Highway/Railroad Bridges: 2
3. Railroad Bridges: 5
4. Ferries (Highways and Railroad): 6
5. Total Crossings: 28

* South of San River and north of Krakow are 3 highway and 2 railroad bridges.

Note: Vistula also has two dams:⁴

Wroclawek (11 -)

Bozskowice (16 -)

Oder River Crossings (North of Wroclaw)

1. Highway Bridges: 20 **
2. Highway/Railroad Bridges: 0
3. Railroad Bridges: 13 **
4. Ferries (Highway and Railroad) : 6
5. Total Crossings: 39

** Seven bridges consist of double and widely separated spans
(in east-west direction).

Note: Wroclaw has a minimum of two highway bridges and one railroad bridge.

Alps. The longest low altitude leg will be 500 nautical miles. Meteorological records indicate that the weather in July over the target areas (in Poland) should be highly suitable for the operation. The possibilities for bombing aborts as a result of cloud or fog conditions are minimal.

Other missions to be flown during Phase I include the protection of the arriving RDG (floating POMCUS) in Trieste. This convoy of about 38 transports plus escorts is especially vulnerable to air attacks once it enters the Adriatic Sea. The maintenance of air superiority over the Adriatic during its passage is a critical task for the NATO Air Force. The Italian Air Force (311 aircraft) is expected to be largely intact by the time the convoy arrives in the area (D + 5 through D + 7) and will be tasked with the mission. Should Pact air present an unusual threat at that point, reinforcements will be drawn from 4th ATAF.

The air war for phase II is shown on Figure 25 and represents the first operational period conducted by the new Air Force headquarters (see Fig. 7). The force consists of 968 aircraft and will fly an average sortie rate of 2.0. The loss rates for D + 7 and D + 8 are four percent (Table 32) and represent attacks on Pact airfields in Czechoslovakia, Poland, Hungary, and an around the clock combat air patrol (CAP) umbrella over the enveloping force.

The corresponding Pact Air Order of Battle, sorties, and losses are shown in Table 33. As indicated, Pact is expected to throw 614 aircraft against the envelopment. At the end of D + 8, the number has grown to 810. The loss rate of 8% for these two days is based on the consideration that the Pact pilots are less skilled and are operating in a surprise environment against a planned and coordinated US air campaign.

TABLE 32

US AIR ASSETSSUPPORTING ENVELOPMENT OPERATIONS

	D + 7	D + 8	D + 9	D + 10
1. AOB at start of day	968	1016	1061	1060
2. Sortie Rate	2.0	2.0	2.0	2.0
3. Total Sorties	1939	2033	2121	2120
4. Loss Rate	4%	4%	6%	6%
5. Aircraft Lost	78	81	127	127
6. Reinforcements	126	126	126	126
7. AOB at end of day	1016	1061	1060	1059

TABLE 33

PACT AIR ASSETSOPPOSING ENVELOPMENT OPERATION

	D + 7	D + 8	D + 9	D + 10
1. AOB at start of day	614	779	810	848
1.1 Hungary	75	69	62	54
1.2 Czechoslovakia	55	51	47	41
1.3 Poland	68	131	180	294
1.4 USSR	416	528	521	458
2. Sortie Rate	1.0	1.8	2.0	2.0
3. Total Sorties	614	1402	1620	1696
4. Loss Rate	8%	8%	6%	6%
5. Aircraft Lost	49	112	97	102
6. Reinforcements	214	143	136	0
7. AOB at end of day	779	810	848	746
7.1 Hungary	69	61	54	48
7.2 Czechoslovakia	51	45	41	36
7.3 Poland	131	178	294	259
7.4 USSR	528	519	458	403

CAP operations will be flown by F-15, F-16, F-4, and F-5 aircraft. Enemy airfields, within striking range of the column, will be repeatedly struck by the remainder of the envelopment tactical air. Initially, 100% of the F-15, F-16, and F-5 force and 75% of the F-4 force will be used in the air superiority role. Once air superiority is established, 25% of the F-16's and 75% of the F-4's will revert to the interdiction missions, while all F-15's and F-5's will be retained in the air superiority role. Basing will initially be from southern Germany and Austria and will 'roll forward' with the advancing columns with A-10's and F-5's operating nearest to the point of advance. Around the clock CAP will be provided with F-15's augmented by F-5, F-16, and F-4 during daylight hours. At night, F-15 and F-4 aircraft with their all weather fire control systems and RADAR missiles will provide coverage. It is anticipated that the bulk of the Pact attack will occur during daylight hours and our forces will be positioned accordingly. The excellent pulse dopler RADAR of the F-15 will be utilized to direct other fighters into advantageous positions for attack.

Since the ground forces are moving long distances during D + 7 and D + 8, they will present vulnerable flanks. The interdiction mission is consequently very important, especially in respect to the left and right flanks in Czechoslovakia, and in respect to the high speed avenue of approach from northwest Hungary in the direction of Wien (Fig. 2).

The interdiction mission will be accomplished by F-4, F-16, A-10, A-7, and F-111 aircraft with both PGM (precision guided munitions) and free-fall weapon payloads. The F-111's will continue to operate from bases in the United Kingdom, in singles and in pairs, during night and inclement weather conditions. Their main ordnance will be PGM, MK-84 LGS's, or GBU-15's.

Their primary objective will be the continued interdiction of crossings on the Oder and Vistula Rivers, including tactical bridging.

The majority of A-10's will be retained in the armor intensive central region. Those supporting the envelopment operation will be used near the spearhead of advance for localized close air support (CAS) and will execute limited interdiction missions in areas not posing an excessively hostile environment. The A-7, with its excellent on board computer and long range will be used extensively for interdiction with conventional (non-PGM) ordnance during VFR operations. During inclement weather, it can be used for area interdiction by flying on the wing of a LORAN equipped F-4 or F-111 aircraft.

The F-4 will carry the brunt of the interdiction campaign. Initially (D + 7 to D + 8) up to 75% of the available F-4's will be used in an air superiority role. Once air superiority is established, all F-4's revert to the interdiction role using a mixture of PGM and free-fall weapons. Although not as capable as the F-111, they represent a credible all weather delivery system. Twenty-five percent of the F-16's will be used in general purpose interdiction roles after establishment of air superiority over the advancing columns, while all would be used in CAP roles during D + 7 and D + 8 and until air superiority is clearly established. All interdictions into high threat areas will be supported by F-4G "Wild Weasel" aircraft and appropriate CAP support.

In Phase II the US Tactical Air will be operating from captured air bases in Austria and central Czechoslovakia as was outlined in Table 23. This forward deployment will increase sortie rates and enhance air responsiveness to the rapidly moving ground units in what is expected to be a dynamic and often chaotic environment.

The missions for Phase III are depicted in Figure 26. The interdiction missions shift to the right (east) flank. The major thrust is to stop Pact attacks or attempted linkups with their surrounded forces. At the same time air superiority must be maintained over captured Polish territory in order to speed up the consolidation of the envelopment operation.

The air war will be affected by the liberation of a large number of air bases in Poland. The operations will be transferred by theater transports (C-130's) from the air bases in southern FRG to southern Poland. The tactical flight operations will be conducted as described for Phase II. After the establishment of air superiority, limited forward basing of F-111's may be considered when the security of these operating bases is assured, and it is deemed practical to deploy the specialized ground support equipment for F-111's.

The Pact air is expected to launch determined attacks to stop the penetration, especially on D + 9 and D + 10 when the objectives of the maneuver have become sufficiently clear to the Soviet high command. The US loss rates for this period are considered to be 6%. At the end of D + 10, the US will have 1059 aircraft dedicated to the success of the ground operation (Table 32). The Pact air forces are also expected to suffer at least a 6% loss rate (a highly conservative number) and will finish D + 10 with 746 aircraft dedicated to stopping the envelopment (Table 33).

The summary of the Pact and US air order of battle is presented in Figure 27. As can be seen, the US Air Force will maintain a comfortable numerical superiority over the Pact forces to D + 10. The data has been extrapolated to D + 15 using a sortie rate of 2.0 and a loss rate of 6%. It was also assumed that reinforcements from CONIS will arrive at a rate of

126 aircraft per day. The Pact data past D + 10 is considered to be highly hypothetical. With the collapse of the Pact rear area (in Poland), it is difficult to predict what, if any, air opposition they will be able to muster between D + 11 and D + 15.

The air war for Phase IV continues with interdiction operations on the right bank of the Vistula River. As an additional task, bombing missions will be flown against northern German and uncaptured Polish ports in preparation for the amphibious landing on the northern coast of Poland on D + 13. Air superiority umbrella is also extended over the Baltic (Fig. 28). One very important task during Phase IV will be to establish backup air lines of communications into the XI and XII Corps areas in Poland. The long ground lines of communications from Trieste and southern Germany and Wien are expected to reach a breaking point at that time. The sea line of communications into northern Poland is scheduled to remedy this situation. However, should the amphibious operation fail or be delayed, the ALOC will be required to pick up the mission.

During Phase V the attention of all combat units, including tactical air assets will be shifted to defending the Vistula River line against Soviet counterattacks (Fig. 29). Major air missions include the interdiction of Soviet forces and the activation of captured Pact airfields. A general reorganization and reposturing of forces will be the order of the day. The temporary Unified Command and the related Air Force headquarters will be deactivated, and the air squadrons will revert to the control of 4th ATAF, who will assume full responsibility for the Vistula line, as well as for the southern flank (Hungary and eastern Czechoslovakia).

CHAPTER VII

FOOTNOTES

1. The International Institute for Strategic Studies, The Military Balance 1979-1980, pp. 8, 11, 14-16, 20-30.
2. Horacio Rivero, "Why a US Fleet in the Mediterranean?" US Naval Institute Proceedings, May 1977, p. 86.
3. Europe Road Atlas, pp. 54-55.
4. Ewa Trzeciak and Janusz Wankowicz, ed., Poland: A Handbook, p. 110.

CHAPTER VIII

ALTERNATE NATO STRATEGY, NAVAL OPERATIONS

The campaign rests on Naval support in four separate regions. First, the Sixth Fleet, in conjunction with NATO units must clear the Mediterranean of all Pact surface forces. A total of 48 hours has been allocated to accomplish this action. On D + 3, the floating POMCUS (RDF assets) will be moved from Gibraltar to Trieste (Fig. 30). This move is expected to be accomplished in less than 90 hours and at speed of twenty knots (by D + 6). The mission for the Sixth Fleet will be to protect the convoy against any air and submarine threat.

Should entry into the Adriatic be considered too hazardous because of subsurface, mine, or air threat, then the floating POMCUS units will be landed at the alternate site of Genoa on D + 4.

The second Naval mission is in the Atlantic and involves the passage of the Amphibious Task Force (ATF) with the embarked Marine Amphibious Force (MAF). The force must be protected against surface, subsurface and air threats. The latter becomes especially acute upon entry by the ATF into the North Sea.

The third task involves the sealing of the southern Baltic to preclude the evacuation of Pact forces by sea. This task becomes especially important between D + 9 and the amphibious operation on D + 13.

The final task is to support the ATF with the amphibious operation on the northern Poland coast, as outlined in Chapter IX.

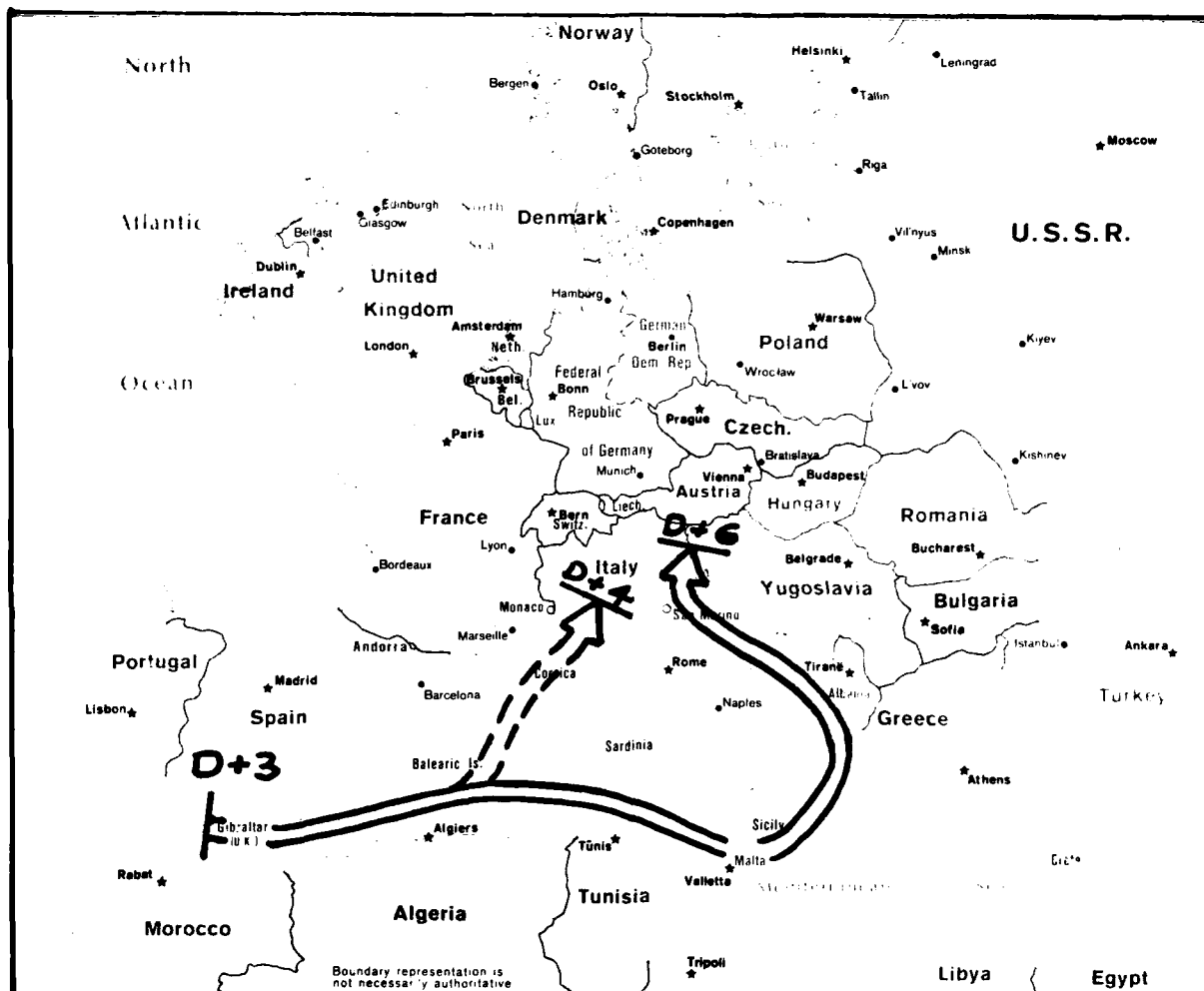


Figure 30. The RDF will be moved from Gibraltar to Trieste by D + 6.

CHAPTER VIII

FOOTNOTES

1. Horacio Rivero, "Why a US Fleet in the Mediterranean?" US Naval Institute Proceedings, May 1977, p. 86.

CHAPTER IX

AMPHIBIOUS OPERATIONS IN THE SOUTHERN BALTIC

The purpose of the amphibious operation in the Baltic is to establish a logistical line of communications to the northern coast of Poland (Fig. 31). This landing operation is to be executed by a MAF that has been ~~pre~~positioned on the US East Coast and supported by the indigenous NATO forces. The operation will consist of the following phases:

1. Transit of the ATF with embarked MAF to the North Sea and the concurrent clearing and sealing of the Baltic. During this phase the Pact surface navy is eliminated from the area. Key Pact harbors will be mined and/or bombed including Kaliningrad, Gdynia, and Rostock (see Appendix 2). This operation is designed to preclude both the evacuation of Pact forces from Germany by sea, and to insure the security of the amphibious operation from surface attack.

2. During the second phase the Sweden-Bornholm gap is sealed, and the amphibious task force enters the Baltic. At the same time, NATO air and naval aviation resources will establish air superiority over the area.

3. The third phase involves the amphibious assault of the objective.

4. The last phase is concerned with logistics over the shore (LOTS) operations in support of the XI, XII, and XIII US Corps. (not covered by this study)

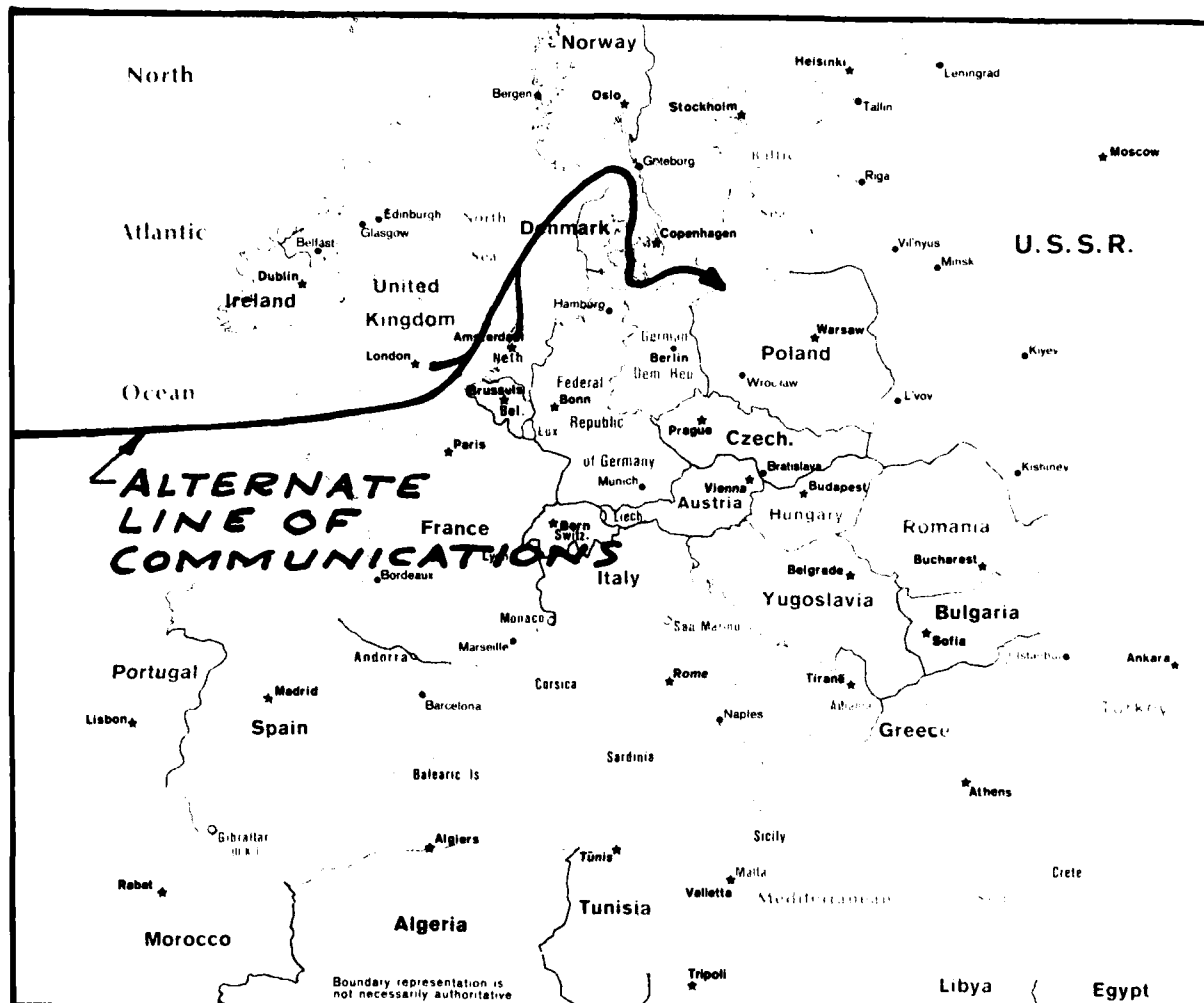


Figure 31. Alternate sea line of communications to northern Poland.

THE AMPHIBIOUS TASK FORCE

The alternate line of communications through the Baltic into northern Poland will be established by a Marine Amphibious Force (MAF) on D + 13 or M + 18 by means of an amphibious operation on the Polish coast. The specific mission of the force will be to secure the beachhead including all rail, air, and highway lines of communications within the beachhead, and to await linkup by the enveloping ground forces of the XII Corps (Fig. 32).

This operation will be conducted by Allied Command, Atlantic. Indigenous NATO resources will be used to escort and to protect the ATF, to clear the Baltic of Pact surface forces, to mine key ports of Kaliningrad, Gdynia and others, to neutralize Bornholm if necessary, to secure the Sweden-Bornholm-Poland gap, and to support the amphibious operation with naval gunfire and air. Allied Forces Baltic Approaches (BALTAP) and the Tactical Air Force established to control and coordinate all air support for the envelopment operation will assist in securing and maintaining air superiority over Denmark and the Baltic. (See Chapter VII).

The key contradiction in the proposed operation involves timing. With the current disposition of the ATF shipping assets in both the Pacific and Atlantic, about 45 days will be required before a MAF operation can be undertaken in Europe. At the same time, it is estimated that the same operation can be launched in 15 days when all ships have been pre-positioned in the US Atlantic coast ports.¹ Since the amphibious operation must be conducted as early as D + 12 or M + 17, pre-positioning of the MAF shipping on the East Coast is a firm requirement.

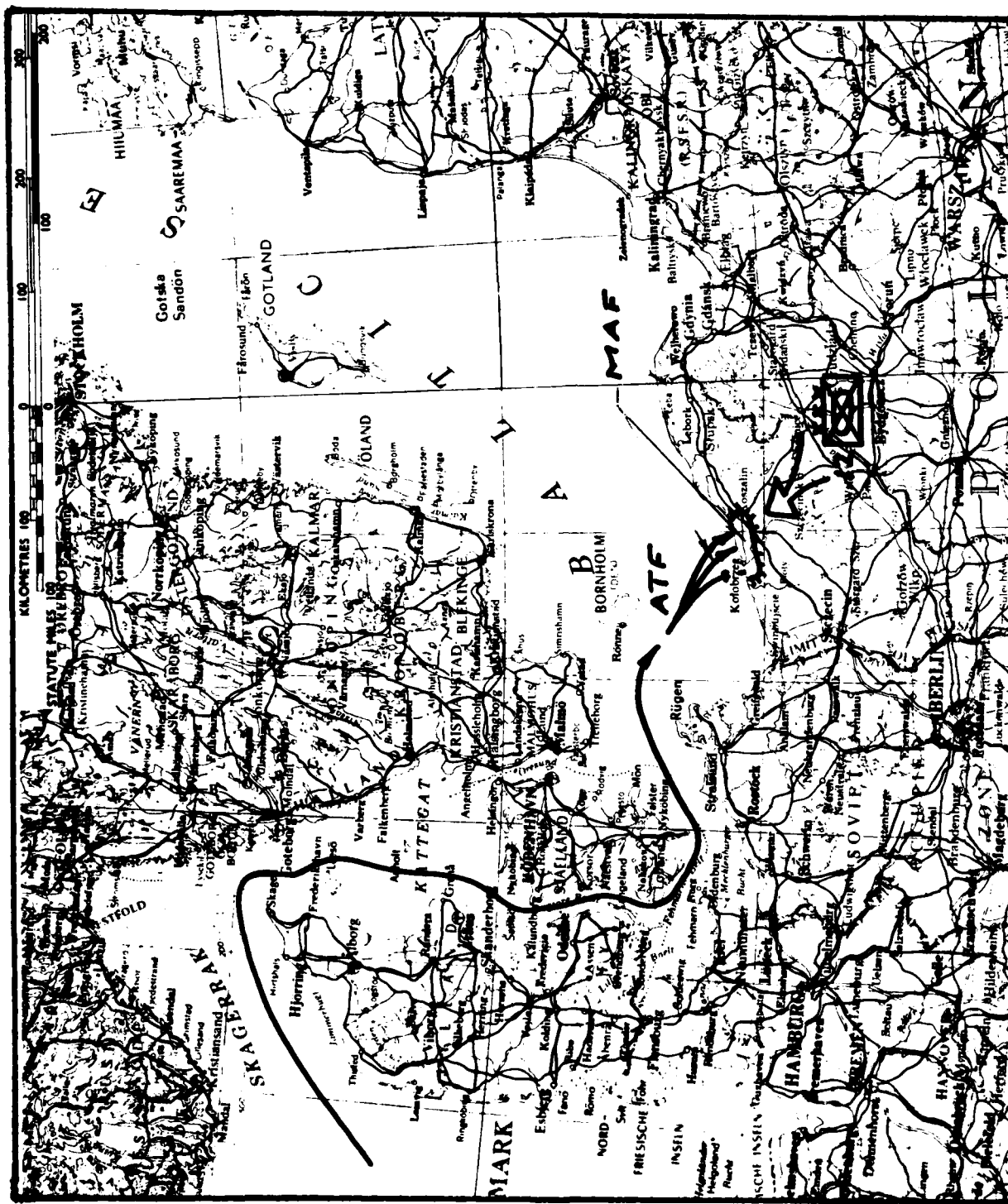


Figure 32. The MAF will link up with the XII Corps.

Other than pre-positioning the MAF shipping, the force must be provided with sufficient rotary wing assets to permit the heliborne landing of about 50% of the initial assault forces. The follow-up echelons will move over the beach, while captured airfields and helicopter assets would be used to the maximum extent practical to seize rear areas.

DENMARK: THE GATEWAY TO THE BALTIC

Before amphibious operations can be undertaken in the Baltic, the following conditions must be met:

1. Denmark must be under NATO control.
2. The southwest coast of Sweden must be free of Pact control.
3. The east coast of Schleswig-Holstein, north of Lubeck must be in Allied hands. This includes the island of Fehmarn.
4. The Baltic must be cleared of Pact surface forces, and the Pact ports in East Germany and Poland mined (see Appendix 2).
5. The Sweden-Bornholm-Poland gap must be secured.
6. Pact submarine threat in the Baltic must be brought under control.
7. Air superiority must be achieved and maintained over the Baltic.
8. Bornholm should be maintained in Allied hands. Should that be impossible and the island fall to Pact forces, then all Pact naval and air forces on the island should be neutralized to preclude the launching of attacks against the NATO amphibious task force.

The most critical conditions involve the security of the passage of the ATF through the SKagerrak, Kattegat, and Great Belt (items 1, 2, 3).

The major implication of these requirements are that the ground operations must preclude the penetration of Pact forces past the Lubeck-Hamburg line (Fig. 33). At the same time, the by-pass of Hamburg by Pact forces south of the Elbe could be permissible.

One high risk area is consequently the ability of NATO forces to hold the east coast of Schleswig-Holstein (item 3). Should NATO forces be pushed back to the Danish border, the proposed amphibious operation cannot be executed.

AMPHIBIOUS LANDING SITES

The purpose of the amphibious operation is to establish an alternate line of communications into Poland. Consequently, the landing forces must linkup with ground forces in an area that contains a suitable road and rail network. Other desirable qualities include the hydrographic characteristics, security of the fleet, approaches to the beaches², and proximity of airports that can be used early in the operation.

Two sites were considered for the amphibious operation. The first is centered on the town of Kolobrzeg and the beaches east of the town. The second involves Ustka, about 95 km further east (Fig. 34). Both have advantages and disadvantages as shown in Table 34. The first site is by far superior except for the low beach cliffs and sand dunes that dominate approaches from the sea (Fig. 35). They make a purely amphibious operation impractical. At the same time, a heliborne assault against the cliffs and the nearby airstrip, combined with an amphibious linkup, makes the operation feasible.

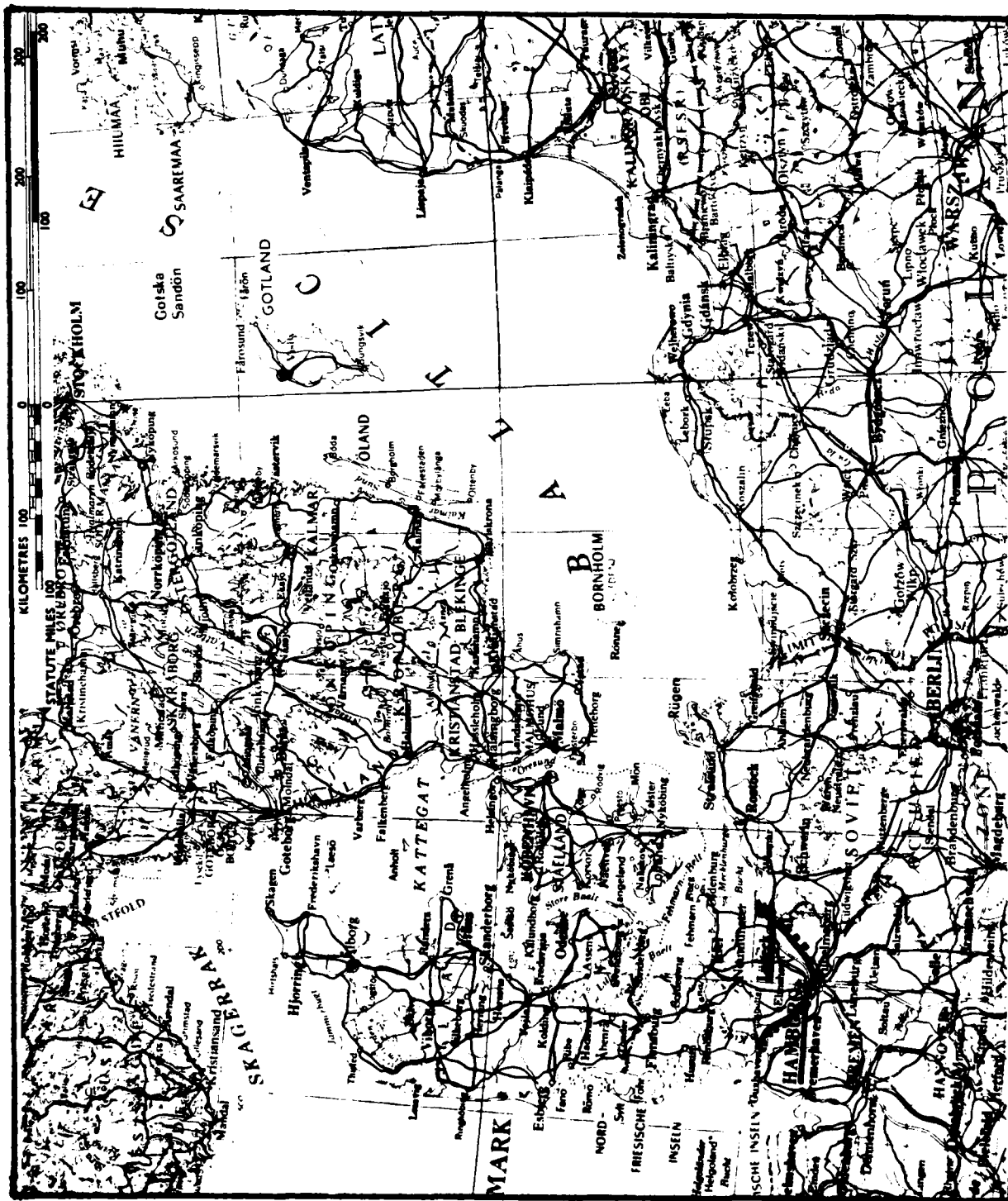


Figure 33. The NATO forces must retain the Hamburg-Lubeck line.

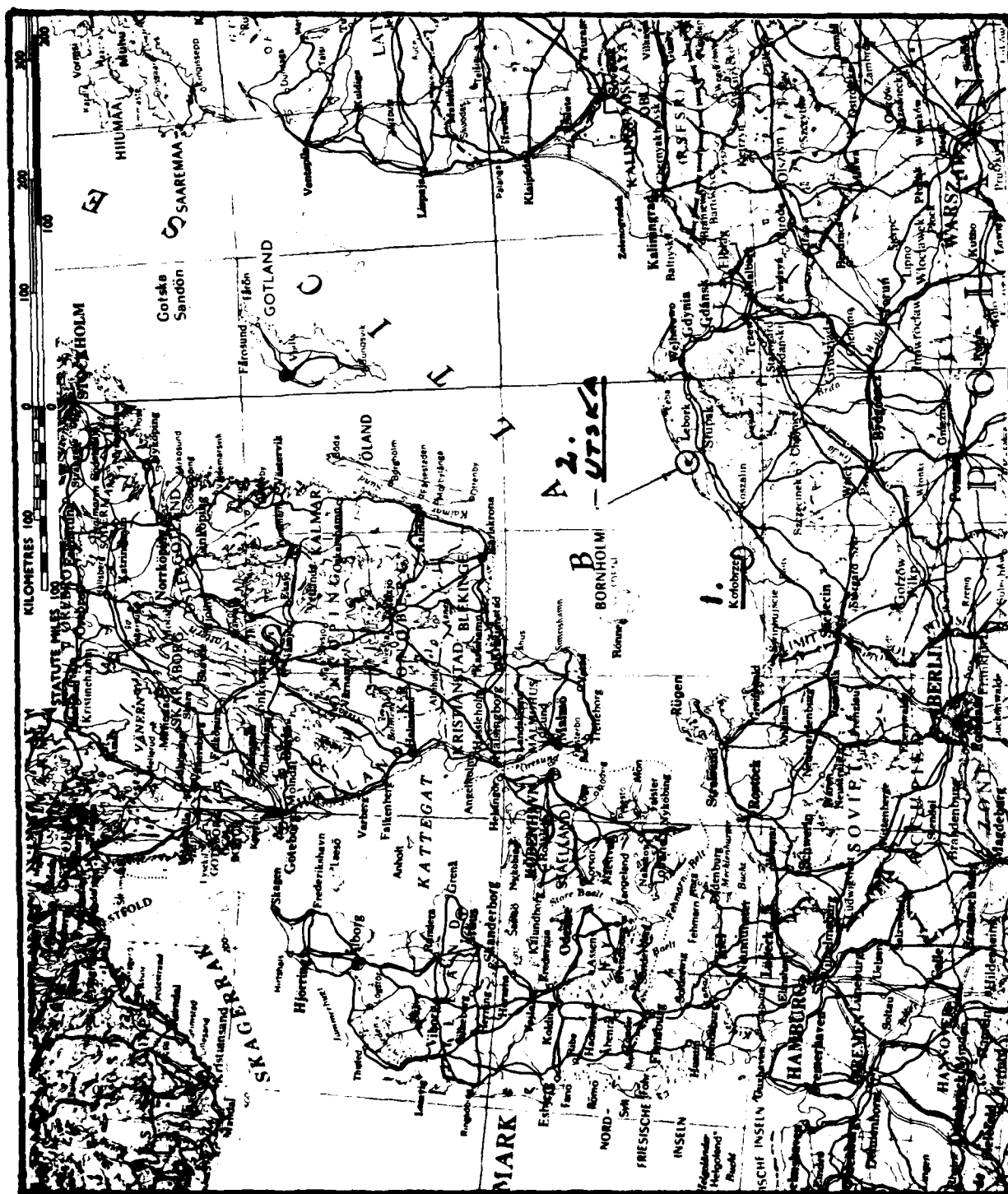


Figure 34. Two sites were considered for amphibious operations.

TABLE 34

CHARACTERISTICS OF CANDIDATE SITES FOR AMPHIBIOUS OPERATIONS

ADVANTAGES

DISADVANTAGES

Kolobrzeg

1. Good road network (3 major highways plus numerous secondary roads)
2. Air base (about 9000 ft. highway strip) located 5 km E. of town and within 1500 m of beach
3. Four rail lines converge in area
4. Beach can be isolated from northern and central Baltic by blockading the Sweden-Bornholm and Bornholm-Poland gaps
5. The main objective, Kolobrzeg, is on the beach
6. Favorable for amphibious and LOTS operations

1. Beaches dominated by cliffs
2. Initial amphibious beach assaults impractical or difficult

USTKA

1. Area serviced by 3 highways
2. Hydrographics favorable for amphibious and LOTS operations

1. First major airport is at Slupsk, about 18 km inland. Others are 12 km and 23 km west and on the coast
2. Only one railroad serves the area
3. Areas behind beaches are dominated by numerous bogs, marshes and small streams
4. The main objective, Slupsk, is 18 km inland



Figure 35.

The swampy areas behind the beaches at Ustka represent a major disadvantage. Its limited road and rail network and a lack of immediate air fields lead to the decision to reject the site.

Other than the two sites considered, there are no other locations between the Polish and GDR border and the Gulf of Danzig that can be serious candidates for an amphibious operation (to establish an alternate LOC). Consequently, the Kolobrzeg area was selected.

CONSEQUENCES OF THE FAILURE TO EXECUTE THE AMPHIBIOUS OPERATION

The amphibious operation represents medium to high risk. The operation can be delayed, cancelled, or fail for a number of reasons.

1. Schleswig-Holstein is captured by Pact forces.
2. Denmark or its straits are captured by Pact forces.
3. The southern Baltic cannot be cleared of Pact surface forces.
4. Inability by NATO to achieve and maintain air superiority over the southern Baltic.
5. Mining of the Great Belt or other key straits by Pact forces.
6. Failure of ground forces to make progress in Poland.
7. Excessive losses by MAF during the crossing of the Atlantic.
8. Concentration of large number of retreating Pact forces on or near the objective immediately prior to the landing operation.

While the risks associated with the operation are higher than we would like, they are counterbalanced by the fact that the failure of the operation has a relatively minor impact on the campaign. The ground forces are already served by two logistical lines from FRG to Austria and from Trieste to Austria. Both are too long to serve comfortably the

units in northern Poland. If follow-on campaigns in eastern Poland are to be executed, a logistical line of communications through the Baltic becomes of vital interest. However, in reference to the current operation, the failure to establish a northern line of communications will only place a larger burden on the existing LOC's and will necessitate air supply to Poland in order to ameliorate some emergency conditions. The key point is that the campaign does not need this amphibious operation in order to succeed. It will, however, facilitate the subsequent consolidation and greatly assist the planning of follow-on campaigns.

CHAPTER IX

FOOTNOTES

1. R. C. Finn, Navy/Marine Corps Forces. Cited with special permission of Colonel Finn.

2. Ewa Trzeciak and Janusz Wankowicz, ed., Poland: A Handbook, pp. 537-544.

CHAPTER X

THE ELEMENT OF RISK

A number of supplements contribute to the success or failure of a military campaign. Sound planning, timely intelligence and strategic surprise greatly enhance the success of highly mobile operations. The elements of surprise and intelligence are considered first before a risk assessment is undertaken.

STRATEGIC SURPRISE

This campaign is basically a very rapid and long thrust by a ground army deep into the enemy rear area. In view of the relatively small enveloping force, the campaign can be carried off successfully only when the enemy can be deceived regarding the true nature of the operation. This deception must be effective for the first 24 hours of the operation, or until the first units have entered Poland. It is preferable, but not absolutely necessary, that the enemy remain "in the dark" regarding the operation until all combat units have entered Poland, or about 36 hours after the start.

At the other extreme, the operation should be made known to the public and to the enemy when the enveloping forces have reached about 1/3 way across Poland to the Baltic, in order to hasten the collapse and surrender of his fronts, his military organizations, and to undermine the political loyalty of the Pact nations.

The operation has been planned with strategic deception in mind. The Soviet high command will expect the activation of POMCUS units in FRG and

will most likely look for their deployment in reinforcing role or as counterattacking forces in West Germany. The main problem is how to deceive the enemy regarding the mission of the floating POMCUS RDF units. While the landing of the units in northern Italy will be difficult to conceal, its most likely mission could be in the Balkans or Hungary. This perception should be reinforced by Air Force attacks on Soviet units in Hungary (see Chapter VII), and should be strengthened by active deception means (unusual visits, announcements, planted leaks, etc.).

The most critical time is when the units move into Austria on D + 7. The departure of POMCUS units in FRG in the eastern direction could indicate a counterattack through western Czechoslovakia. Even when the units enter Austria, two possibilities exist. The objective could be the plains of Hungary, or less likely, the hilly central Czechoslovakia. In view of the position of the floating POMCUS (in northern Italy), the Hungarian option cannot be ruled out by Soviet high command although central Czechoslovakia must also be considered.

The element of surprise could be lost when the units enter Czechoslovakia at 3 a.m. on D + 8. However, at that point Poland will be four hours away. The likelihood that the Russian high command can intercept the operation on such short notice is relatively low.

On the other hand, ample opportunities do exist for compromising the complete campaign. To minimize such possibilities certain steps should be taken.

1. The planning of the operation and the activation of the unified and subordinate commands should proceed under the cover of strict secrecy.

2. The units should be told of their mission only upon departure from Wien, where the orders and maps should be issued.

3. Prior to D + 8, units should be told that the mission is either southwest Czechoslovakia or Hungary.

The general thrust of the strategic deception operation should be to project to the mind of the Soviet high command a threat in the Balkans or Hungarian area. In other words, the threat should be so remote as to pose no serious concern to the Soviet success in the north central Europe. In no case should the strategic deception measures divert the fourth and fifth Pact front units from East Germany.

STRATEGIC INTELLIGENCE

The success of the campaign depends on the receipt of reliable intelligence. There are two key elements of strategic information that can cause the campaign to fail, and consequently must be determined in a timely and accurate manner. The first involves the possible Pact invasion of Austria (Item 1.4 Table 35). The occupation of any western part of Austria by Pact forces will make the execution of the proposed campaign impossible. Consequently, the concentration of Pact forces in areas bordering Austria would be of vital interest to the Unified Command during the planning and initial execution phase of the campaign.

The timing of the campaign has been established at D + 7. This is purely a planning date and has little real significance. It means that the forces should be ready to execute the campaign on D + 7 or any time thereafter. The actual time depends on the Pact force dispositions. The campaign should be launched only when the fourth and fifth Front units from

TABLE 35

INTELLIGENCE REQUIREMENTS

1. Essential elements of strategic information

- * 1.1 When have the Soviet combat units from the western military districts (Baltic, Byelorussia, Carpathia, Kiev, Leningrad, Moscow and Odessa) reached Poland? (D + 1 / D + 7)
- 1.2 Are the Soviet combat units in the southern military districts (North Caucasus, Trans-Caucasus and Turkestan) deploying west? (D + 1 / D + 15)
- 1.3 Are any military combat units from the Sino-Soviet border (Central Asia, Siberian, Trans-Baikal and Far East military districts) deploying west? (D + 1/D + 15)
- * 1.4 Are Soviets going to violate the Austrian neutrality by military excursions? (D + 1/D + 7)
- 1.5 Location and deployment of Soviet forces in Hungary, especially into Yugoslavia, central or eastern Czechoslovakia or Austria (D + 1/D + 15)

2. Essential elements of tactical information

- 2.1 Movement of Soviet combat units into SE Poland (D + 7/D + 15)
- 2.2 Location of Soviet units in Poland (D + 6/D + 14)

*Key elements of strategic information

the western Soviet military districts have passed through Poland, (Item 1.1, Table 35) since the objective is to capture these forces by an envelopment when they have reached Germany and not to fight them in Poland. Consequently, the timing of the whole campaign depends on the timely receipt and evaluation of strategic military intelligence.

RISK ASSESSMENT

Every military campaign carries a certain amount of risk that the operation will fail. This failure can be complete or partial. The risk analysis of such operations can be accomplished in four parts. First, the actions of the enemy that can cause the campaign to fail are identified. Next, these actions are assigned a probability of occurrence. Third, the plan is modified to counter the highly probable enemy actions that can lead to a failure. Finally, emergency plans are developed to counter the most probable and dangerous enemy moves.

For the purposes of this study, we have restricted ourselves to the examination of possible Pact military actions before, during, and following the execution of the campaign (see Fig. 36).

1. Before the campaign

- 1.1 Invasion of Austria from Czechoslovakia
- 1.2 Invasion of Austria from Hungary
- 1.3 Invasion of Yugoslavia and Italy from Hungary
- 1.4 Capture of Denmark

2. During the campaign

- 2.1 Retention of significant second echelon forces in central or eastern Poland.

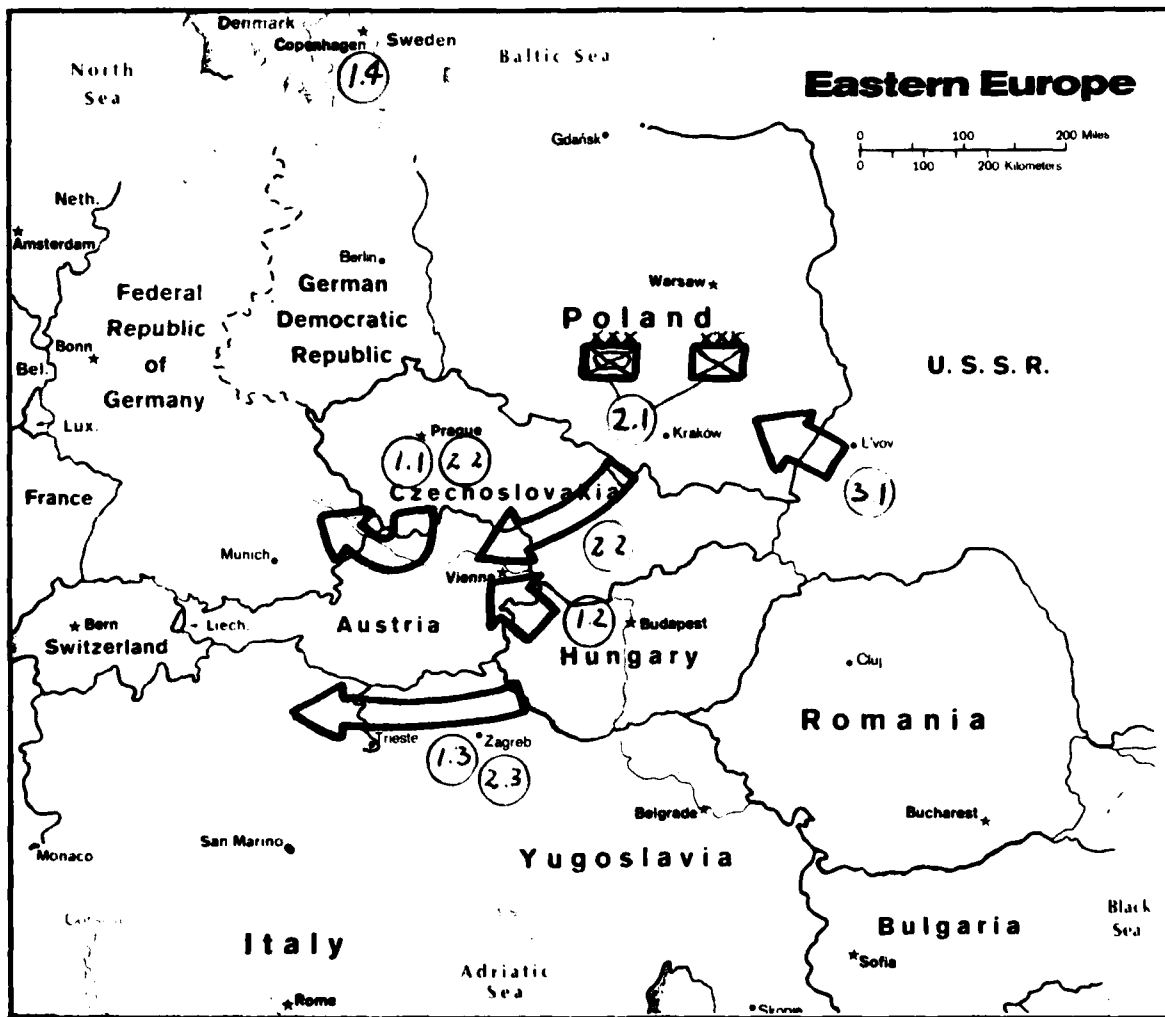


Figure 36. Pact counter move options.

2.2 Invasion of Austria from eastern or western Czechoslovakia.

2.3 Invasion of northern Italy from Yugoslavia.

3. Following the campaign

3.1 Attack into Poland with forces from the military districts of southern USSR and/or Sino-Soviet border.

The most probable and also most dangerous military actions are the Pact invasion of Austria (items 1.1, 1.2 and 2.2) or the retention of significant forces in central or eastern Poland (item 2.1).

The neutral and relatively unarmed Austria undoubtedly is an attractive option to the Soviet high command since it represents an assailable NATO flank (items 1.1 and 1.2 of Fig. 36). The second most probable Pact action is the retention of significant Soviet forces in central and southern Poland (Fig. 36, item 2.1). This action could come about as a result of little or no Pact success in Germany and could represent a reorientation of Pact effort, again most likely in the direction of Austria (item 2.2, Fig. 36).

The invasion of northern Italy by Pact forces through northern Yugoslavia is considered to have a relatively low probability (item 1.3, Fig. 36). The attack into southeastern Poland by Soviet forces from the military districts of southern USSR or from the Sino-Soviet border areas is considered to be an intermediate probability event. It will be met by the XIII Corps in conjunction with concentrated tactical air power and is not considered to be very dangerous.

The capture of Denmark (item 1.4, Fig. 36) or even the lower parts of Schleswig-Holstein will make the amphibious operation in northern Poland impossible (see Chapter IX). Although a Pact thrust into Denmark is

considered likely, the campaign does not depend on the execution of the amphibious linkup. Therefore, the Pact thrust into Denmark is not considered to represent a vital threat.

In summary, the most likely and most dangerous Pact actions are the invasion of Austria and the retention of large forces in south central Poland (items 1.1, 1.2, and 2.1 of Fig. 36). These threats were recognized during the early phases of this project and the campaign plans modified accordingly. The primary counteraction to these threats is the intentional falling back of the NATO forces on the north central German plain (see Chapter VI). This action is designed to convey an illusion of success to the Soviet command, cause them to commit their remaining forces in Germany to reinforce the apparent success, and to cancel any possible operations in Austria as unnecessary.

Although helpful, this action by no means eliminates all or most of the risk. The enemy can still execute a number of the actions outlined in Figure 36. In that case the counteractions would be as follows: (numbers are keyed to Figure 36)

1.1 Pact attempts to envelop our southern flank through Austria. Reaction: Block with POMCUS forces in FRG and execute counter envelopment with floating POMCUS forces from Trieste.

1.2 Pact invades Austria from Hungary. Reaction: Counterattack with XIV Corps and forces from Trieste. Use POMCUS units in FRG to execute envelopment around Pact left flank as shown in Fig. 4.

1.3 Pact invades northern Italy through Yugoslavia. Reaction: Block Pact forces in northeast Italy. Transfer most of the floating POMCUS units through central Austria (by way of Linz) to the Donau Valley and

execute the operation as planned.

1.4 Pact forces capture all or parts of Denmark. Reaction: execute campaign as planned except scrub the amphibious linkup in northern Poland.

2.1 Pact retains large units in southern and central Poland. Reaction: cancel campaign.

3.1 Pact counterattacks enveloping force in southeast Poland across San River. Reaction: XIII Corps defends with massed tactical air. XIV Corps will release one mechanized division to XIII Corps. Any units of the XII Corps not engaged will be likewise transferred.

CHAPTER XI

THE COST OF THE ALTERNATE STRATEGY

The strategy proposed in this study involves drastic revisions in our concepts of war in Europe. We are talking in terms of aggressive instead of defensive strategy, of decoupling from the nuclear threshold, of repositioning our forces, of expanding the ground forces, of activating new organizations, and perhaps of modifying our weapons procurement objectives. Some of these elements involve dollar costs, others do not.

The current US/NATO air forces were found to be generally adequate to execute the proposed strategy. The ground forces and Navy were not. First, the Allied ground forces must be increased to the level where they can handle the Pact attack for a minimum of 15 days (and preferably 45 days) without the use of US POMCUS units in FRG and without the RDF units. The incremental cost of this capability to our European NATO allies has not been identified during this study. It is hoped that the tentative agreements voiced by our NATO allies in May 1980 to assume higher defense burdens for Europe might meet some of the requirements of this strategy, and only little additional expenditures would be necessary.

The proposed envelopment operation is primarily a US campaign. However, the current US forces (1980) are not ready to execute this operation for three reasons. They are not organized for it; they are not deployed for it; and the ground forces and equipment are inadequate in certain key areas.

In the category of deployment, one key problem is presented by the fact that the MAF and its floating assets are not concentrated on the US East

Coast, and that the currently visualized floating POMCUS only encompasses one mechanized RDF division, while a corps size unit is needed. The ships with the equipment for one division size force are also to be positioned on the East Coast when they should be on the west coast of Europe.

The current plans call for the establishment of a six division POMCUS in FRG. Once established, it will be adequate to support the proposed campaign. However, the RFD, as currently configured, is inadequate for this mission for two reasons. First, it is short two mechanized divisions. Second, it is not programmed to be equipped with sufficient shipping to permit the establishment of all its equipment in floating POMCUS.

The operation calls for two infantry or light divisions: the 82nd and the 7th. All other units must be configured for high speed operations deep in enemy territory. The mechanized divisions are mandatory for the campaign. Prior to 1983, the 9th and 24th infantry divisions must be consequently converted to mechanized units.

Operation of the POMCUS units in FRG will rely on host nation support. Evidently no host nation support will be available for campaigns in Austria, Czechoslovakia, Poland, or East Germany. Thus, the Army with four corps must be furnished with its own tactical support increments.

The cost² of these major additions to the US forces is summarized in Table 36. It is estimated³ that the equipment for three mechanized divisions, one armored brigade, and two engineer combat Bn-s (a total of about 13,000 vehicles) can be carried on 20 RO/RO ships (Fig. 37). Additional 4 RO/RO ships have been allocated for CSS units, for a total of 24 RO/RO ships. Existing plans call for 14 fast deployment ships to be purchased for one division.

TABLE 36

COST OF ALTERNATE NATO STRATEGY (FY 78\$)

	FY	81	82	83	Total
1. Floating POMCUS (RO/RO Ships)					
1. Number of ships		8	8	8	24
2. Investment		466.4	466.4	466.4	1399
3. O & M		12	36	60	108
2. New Mechanized Divisions					
1. Number of divisions		1	1	0	2
2. Investment		525	525	0	1050
3. O & M		169.8	509.5	679.4	1358.7
3. Infantry Divisions Converted to Mechanized Divisions					
1. Number of divisions		1	1	0	2
2. Investment		450	450	0	900
3. O & M (additional)		7	20.8	27.8	55.6
4. Tactical Support Increment for 8 Divisions					
1. Number of increments		3	3	2	8
2. Investment		1157.7	1157.7	771.8	3087.2
3. O & M		502.4	1507	2344.3	4353.7
TOTAL INVESTMENT		2599.1	2599.1	1238.2	6436.2
TOTAL O & M		691.2	2073.3	3111.5	5876.0
					12,312.2

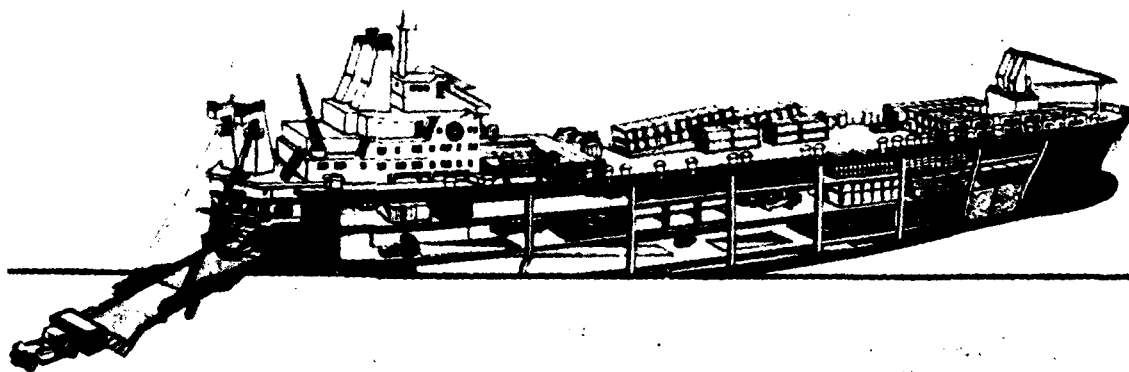


Figure 37. Roll-on / Roll-off (RO/RO) Ship.

Two new mechanized divisions have been included in the cost package. Should French units be available to accomplish the mission, then the costs for these two units should be removed. In addition, 12 RO/RO ships should be struck from the purchase list.

The additional cost of converting another two infantry divisions to mechanized units and the purchase of tactical support increments for 8 divisions, produces a total cost of \$12.31B for the 3 year period (FY 81, 82 and 83). This cost can be placed in perspective by comparing it to the total defense budget. The Department of Defense annual Report for fiscal year 1980 lists the total obligational authorities (on page 21) as follows (in billions):

	1981	1982	1983
Current Dollars	145.7	155.7	166.8
1978 Dollars	118.2	119.8	123.16

The sum of the investment and O&M costs on Table 36 can be related to the total defense budget as follows (FY 1978\$ billions):

	1981	1982	1983
Additional funding required	3.29	4.67	4.35
% of defense budget	2.78	3.9	3.5

The conclusion is that the proposed alternate strategy will cost the nation an additional 2.78 to 3.5% above the projected DoD budgets. This represents a relatively small cost in view of the significant increased military effectiveness and flexibility in the foreign policy arena.

As was mentioned earlier, the dollar costs are only one part of the price that must be paid. The other "costs" involve the reorientation of our defensive strategy to offensive strategy, certain reorganization of

the military commands, activation of new commands, and the repositioning of forces and equipment. It should be noted that in addition to the undefined costs to our NATO allies, the expense of bringing our own active units to full strength had also not been included in the above analysis.

CHAPTER XI

FOOTNOTES

1. Harold Brown, Department of Defense Annual Report, Fiscal Year 1980, p. 21.
2. US Army War College, Forces, Costs, and Manpower Data Book, pp. 14-16, 20, 26, 54.
3. US Army War College, Military Sealift, p. 26.

CHAPTER XII

PACT STRATEGIC OPTIONS

Once the envelopment has been completed, the Soviet command has no choice but to abandon their strategic plan in Central Europe. Broken into two pockets A and B of Figure 38, the most probable action should be an attempted breakout with attacks across the Oder River in the easterly direction (1) with concurrent attacks across the Vistula River in the western direction (2 and 3). Another attempt might be to combine the forces of the two pockets (5). Although possibly dangerous to NATO (when no link has been established through the Baltic), this operation would do little to remedy the situation. Undoubtedly attempts will be made to evacuate units and key personnel by sea (4), and by air if possible.

Another option for Pact is to do nothing for a period of several weeks. This reaction could be the natural result of a general breakdown of Pact planning, command and control functions. This would permit us to bring over reserve combat units, reinforce our position on the Oder River and to tighten the grip on the Pact forces in the pockets.

Once the Pact attempts to break out fail, a likely possibility would be an order to defend in place at all costs and to bring up the units from the Sino-Soviet border for a counterattack through either northern Poland or by way of Hungary-Austria-Czechoslovakia and GDR. To preclude the success of this plan, all attempts should be made to interdict the Trans-Siberian railway by the destruction of key bridges on the line, especially between the Ural Mountains and Lake Baikal. This could be accomplished by refueled FB-111's. Special weapons also could be developed for it,

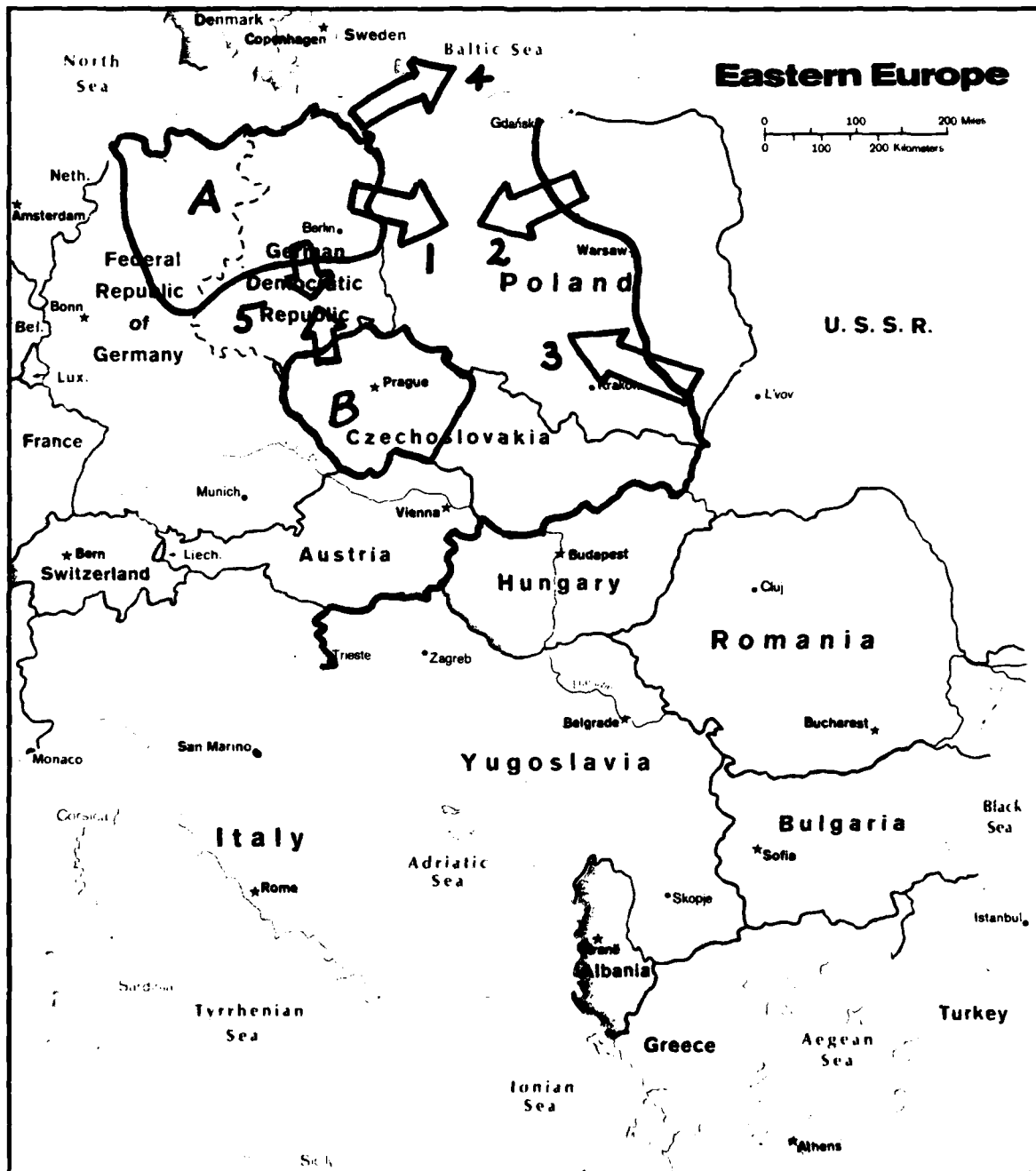


Figure 38. Pact attempts to breakout.

such as conventional warheads for ICBM's or cruise missiles with 2000 pounds of high explosive payloads and scene (railroad bridge) matching guidance packages.

The Soviets could also elect the nuclear and/or chemical-biological option. The proposed envelopment operation depends on a number of choke points, such as the city of Wien, the passes in central Czechoslovakia, and the autobahn in the Donau River valley. The city of Trieste is another attractive target during D + 6 through D + 8. The pre-planned timely use of Pact nuclear weapons in Austria, Italy, and Czechoslovakia could effectively blunt the offensive or facilitate a subsequent breakout.

This option has a number of political disadvantages. Nevertheless, it is a possibility that cannot be dismissed in the planning cycle. This Pact action should activate the nuclear linkage on the NATO side.

If the Soviets do not choose the nuclear option, they will most certainly seek a diplomatic solution. There would be a Soviet call for an immediate cease fire with the lines of contact as cease fire lines. The objective of such Soviet action would be as follows:

1. Avoid destruction of their surrounded forces
2. Attempted use of nuclear blackmail
3. Gain time to bring up all remaining Soviet forces from Asia and other parts of the Soviet Union (possible up to 75 divisions)
4. To expand mobilization in the USSR
5. To counterattack from eastern Poland after the preparations are complete and the diplomatic negotiations have served their purpose.

The only conclusion that can be drawn at this point is that any political solution that does not include the destruction or surrender and

retention of the sorrounded Pact forces will lead to the subsequent defeat of the NATO forces and the likely accomplishment of the Soviet strategic objectives outlined in Chapter II.

CHAPTER XIII

SUMMARY AND CONCLUSIONS

A number of conventional strategies can be developed to destroy the Pact forces (Fig. 39). This study has addressed only one such possibility (A). Another similar plan could be developed around landings at the Black Sea and the Gulf of Danzig on the Baltic (B and C). A much smaller operation would be possible through the western part of Czechoslovakia and was briefly addressed in Chapter III. Coordinated operations between NATO forces in the European theater and PRC forces in Asia represent the largest possible operation with the most significant geo-political consequences.

The study has concluded that it is possible to spoil a Pact attack in the central region, Europe without breaching the nuclear threshold, and to capture in the process up to two-thirds of the Pact and Soviet forces. At the same time, it is possible to defeat the Soviet ambitions to gain control of the strategic Western Europe. The operation can be accomplished largely with existing naval and air forces. Only minor increases are necessary in US ground forces, and some special items must be purchased, such as RO/RO ships. In terms of the DoD budget, the alternate strategy means a 2.8 to 3.9 percent increase over the published preliminary budget for the next three years. Other than monetary costs, the plan also calls for some minor organizational changes and significant redistribution of US forces.

The planned operation is predicated on the premise that the Pact campaign in central Europe can be frustrated by a shift in the center of gravity of the operations in northwest Germany to southern Poland. A plan for a large scale envelopment operation has been developed as a vehicle to accomplish this shift.

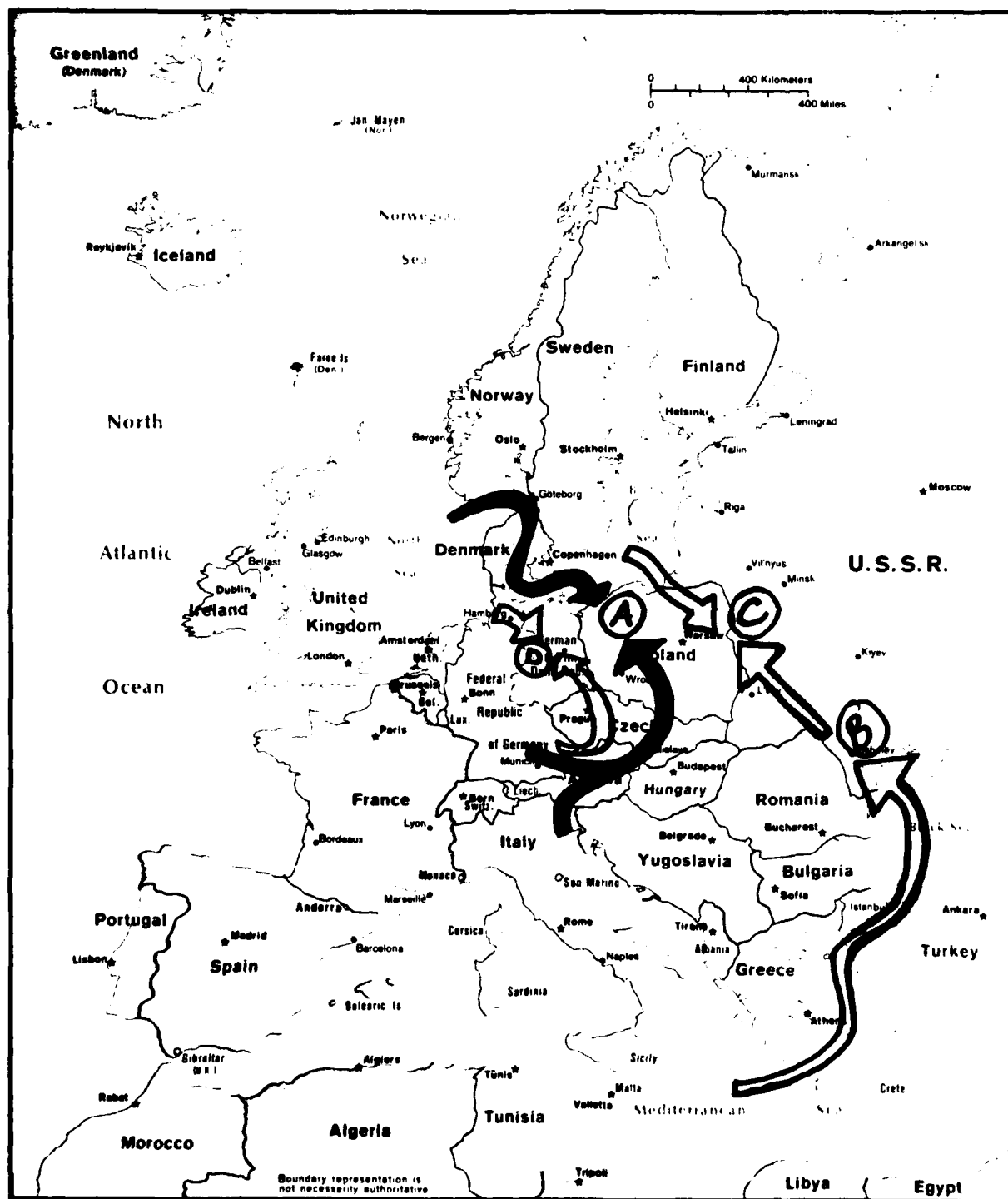


Figure 39. Conventional strategies to defeat Pact forces.

The campaign, to be executed in nine days under optimum conditions, capitalizes on an exposed flank and the elements of surprise, the massing of the air and ground forces on the axes of the operation, and involves major contributions from the Sixth Fleet, the NATO naval units and our Marine forces. Other than surprise and mass, the envelopment operation is highly dependent on accurate and timely intelligence regarding Soviet force movements in the European theater.

Most of the study conclusions are summarized in Table 37. During the study it became obvious that the US ground forces are suffering certain equipment shortcomings. For example the M-60 tank is too slow and consequently, not suitable for operations involving rapid and long penetrations. Other than its speed deficiency, it is estimated that the crew endurance will dictate advance rates, especially during the early parts of the campaign. A solution would be to field one relief crew for every two armored fighting vehicles. This crew would accompany the combat units in APC's configured with sleeping accommodations. Certain design features of the Israeli Merkava look very attractive to staff officers planning long penetrations and should be considered carefully by our tank development community.

Another, but less significant, equipment deficiency involves the limited range of the 155mm SP howitzer (220 mi vs about 300 mi for most other tactical vehicles). Special refueling stations must be established in Austria and Czechoslovakia to cater to its special requirements. Although not a serious operational problem, it significantly complicates the logistical planning for corps size operations involving rapid and long moves.

This study has concluded that alternate NATO strategies in Europe are not only feasible, but they can be executed with existing forces after only

slight modifications in organization, equipment, funding, and dispositions.

When the necessary steps are taken, it will become possible to deal a crushing defeat to the Pact forces should they choose to attack NATO in 1983 or thereafter.

TABLE 37

CONCLUSIONS

1. NATO strategy that eliminates the nuclear linkage as a component of deterrence is possible if certain changes are made in the current US and NATO force structure, equipment and deployment.

2. The following changes are necessary:

2.1 All US units in CONUS must be brought to full strength and the roundout brigades replaced with active units.

2.2 The POMCUS in FRG must be increased to 6 divisions plus three independent Bde size units and appropriate CS and CSS units, all underground. The CSS units must be capable of supporting an army of 11 divisions plus 4 independent brigades without host nation support.

2.3 The RDF must be given a floating POMCUS in the Iberian Peninsula region.

2.4 Additional two mechanized divisions must be raised with their equipment in floating POMCUS in England or in the Azores, Madeira, Canary Islands, or Gibraltar.

2.5 Preferably all armored and mechanized units should be equipped with tanks and APC's that can sustain 40 km/hr on open road. Currently the following equipment can meet this requirement: M-113A2*, M-551, XM-1, and XM-2. The M60 versions have a speed of 48.3 km/hr and cannot be effectively used in the campaign, at least not in the lead elements.

2.6 The FRG and other NATO forces must be brought to sufficient levels to be able to delay successfully in northern Germany without assistance from POMCUS forces.

*Road speed is 68.4 km/hr.

2.7 The MAF must be assembled on the US East Coast with the necessary shipping. The initial assault wave must be equipped to permit half of it to execute heliborne assault.

3. The cost of the above changes has been estimated as \$6.4B in investment costs and about \$2.0B/year in operations and maintenance costs (FY 78\$). These costs must be weighed against the advantages to be achieved by the decoupling of our NATO strategy from a nuclear threshold.

Increased regional stability

Decreased threat of nuclear war

The elimination of US cities as hostages for West European security

Increased flexibility in foreign policy and our exercise of world leadership

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APPENDIX 1

A SAMPLING OF HISTORY

The geographical areas of interest to this study include Austria, northern Italy, central Czechoslovakia, and central and western Poland. Since the early days of recorded Western history, this area has been a scene of innumerable wars, battles, and campaigns. A favored invasion route of the nomadic tribes that chose to challenge the might of the Roman Empire, as well as that of the German, Russian, and United States armies of more recent vintage (World War II), its history should be of direct interest to any staff planning operations in the area.

EXAMPLES OF PLANS TO ENVELOP CENTRAL EUROPE THROUGH THE SOUTHERN FLANK

In the course of research for this paper, other plans and campaigns that involved the envelopment of Central Europe have been uncovered. Three are summarized below.

During the earlier days of World War II, the Allies were under constant probing from Russia to open up a second front.¹ Landings in France, the Balkans², and even in Archangel³ were proposed by Stalin in order to relieve pressure on his retreating armies. All proposals were rejected by the Allies. The position of the United States was that such premature efforts would dilute the main strategic objective: the capture of the Ruhr and Berlin and the defeat of Germany after a landing in France. Although Churchill could never be persuaded to abandon completely his fascination for the apparent easy tactical plums on the northern shores of the Mediterranean, the plan for the Balkan operation never seems to have proceeded past the conceptual stage.

As a compromise, the Allies opened a second front in North Africa.⁴

Another concept emerged in conjunction with the Overlord/Anvil operation (Fig. 40). It was suggested by Roosevelt and endorsed by Churchill and involved "a right-handed movement from the north of Italy, using the Istrian Peninsula and the Ljubljana Gap towards Vienna."⁵ This was to be an alternate to the landing in southern France (Anvil). The intent was to reduce Russian influence in the Balkan area subsequent to the war. As expected, Russia backed the southern France operation, with the obvious intent of keeping the British out of the Balkans.⁶ Although as late as in September 1944 at Quebec, Churchill raised the idea of a "stab in the Adriatic armpit"⁷, no serious calculations were produced to show that such an operation would be feasible. According to British military historian Michael Howard, ". . . it may be doubtful whether any were ever made."⁸ This is most unfortunate since the "stab in the Adriatic armpit" most closely represents a key element of the operation proposed by this study (Fig. 40 and Fig. 6).

Other examples that are related to the proposed operation involve the war of the Austrian Succession. In March 1741 Austria invaded Silesia (now Poland) along the area that is now Czechoslovakia⁹ along the proposed invasion route from Wien to Poland. Almost 200 years later, the Germans likewise launched their invasion of southern Poland from central Czechoslovakia.

RECENT MILITARY OPERATIONS IN POLAND

The operations in Poland consume the major share of the proposed envelopment campaign. As part of the background research, the World War II campaigns in the same area were surveyed.

The German campaign^{10, 11, 12} in September, 1939, is most relevant to



Figure 40. The 'Stab in the Adriatic Armist' concept.

the current study (Fig. 41). The campaign consisted of two double envelopments and was based on speed and deep penetrations, if not surprise. The campaign was concluded in 18 days. The Luftwaffe destroyed the Polish Air Force in two days. Its 1600 planes bombed and strafed all principal cities, air fields, railway centers and systematically swept all main highways to dislocate traffic. In addition, it furnished close air support to ground units. The Germans used nine armored divisions (two Pz corps). Warsaw was reached in eight days.

The activities of the Fourteenth Army (and XVI Pz Corps), part of Rundstedt's Army Group South are of particular interest to us, since it attacked in the general direction that the XIII US Corps is expected to operate. The lead German units achieved a daily rate of slightly above 40 km during their advance to Warsaw. This was accomplished by units equipped with the Pz I and Pz II that had road speeds of 37 and 55 kmph¹³ respectively, and ranges less than half of the current medium tanks (see Table 38.)

The second Polish campaign of interest is the Russian invasion from 17 January to 1 February 1945 from the Vistula to the Oder River.^{14, 15, 16} The principal tank was the T-34 with a road speed of 53 kmph. The Russian advance was perpendicular to most of the river obstacles and they averaged only 28.6 km per day. The lower part of Table 38 lists the comparable tank speeds for current and advanced US equipment.

TABLE 38

TYPICAL ADVANCE RATES IN POLAND (WW II)

DATE	LOCATION	DISTANCE KM	RATE KM/DAY	TANKS USED	ROAD SPEED KM/PH	CROSS COUNTRY SPEED KM/PH
1 Sept- 7 Sept 1939	Poland (Czechoslovakia to Warsaw)	325	41	Pz Kw I Pz Kw II	37 55	9.5-13 19.0
17 Jan- 1 Feb 1945	Poland (Vistula to Oder)	430	28.6	T-34	53	19.3
				Pz Kw I Pz Kw II	48.3 68.4 70.0 72.4 72.4	56.3 56.3

Speed Ratios

XV-1 / Pz Kw I = 1.96

XV-1 / Pz Kw II = 1.31

APPENDIX 1

FOOTNOTES

1. J. M. A. Gwyer, History of the Second World War: Grand Strategy, Part I of Volume III, p. 198.
2. Elisabeth Barker, British Policy in South-east Europe in the Second World War, p. 112.
3. Gwyer, p. 201.
4. Barker, p. 112.
5. Ibid., p. 120.
6. Ibid., p. 120.
7. Ibid., p. 124.
8. M. Howard, The Mediterranean Strategy in the Second World War, pp. 65-66.
9. R. E. Dupuy and T. Dupuy, The Encyclopedia of Military History, p. 630.
10. Peter Young, ed., Atlas of the Second World War, pp. 16-17.
11. B. H. Liddell Hart, Strategy, pp. 238-240.
12. Dupuy and Dupuy, p. 1050.
13. F. von Senger und Etterlin, German Tanks of WWII, p. 194.
14. Liddell Hart, pp. 324-326.
15. Young, pp. 218-219.
16. Dupuy and Dupuy, pp. 1114-1115.

APPENDIX 2

PORTS AND RAILROADS

The ports of interest fall into two categories. The first involves harbors that will be used to support friendly military operations (Fig. 42). Trieste on the Adriatic, Kolobrzeg on the Baltic, and Genoa on the Ligurian Sea are in the first group (Genoa is the backup to Trieste). While Kolobrzeg hardly qualifies as a port, the logistics over the shore operation to be established during the campaign is anchored on this resort city on the Polish coast.

The second category of ports is of interest because these are likely to support enemy operations and must be blockaded, mined, or destroyed (Fig. 43). In this class we find such ports as Wismar, Rostock/Warnemunde, Peenemunde, Sassnitz, Wolgast, Tarnowitz, Straslund, Swinoujscle/Stettin, Gdynia, Hel, Baltiysk, Liepaja, and Kaliningrad; all on the Baltic Sea. In addition, the port of Ronne should be blockaded should the Pact forces succeed in the capture of the island of Bornholm.

Trieste became of special interest^{1, 2} when about 24 RO/RO plus 14 "fast" ships were scheduled to disembark a corps size force at the port in a time span of less than three days (D + 6 through D + 8). The rated capacity of the port is 250KT, which equals 15 to 16 RO/RO ships (14,180/Ltons each). It is estimated that by mooring the RO/RO ships to the wharfs by the stern only, most of the ships can be unloaded concurrently. The depth of the water in Trieste's port must be also considered. Not all of the harbor can accommodate ships with the 8.53m draft³ of the RO/RO ships (Fig. 44). However, the depth data is about thirty years old and should



Figure 42. This map is used to support the conclusion.

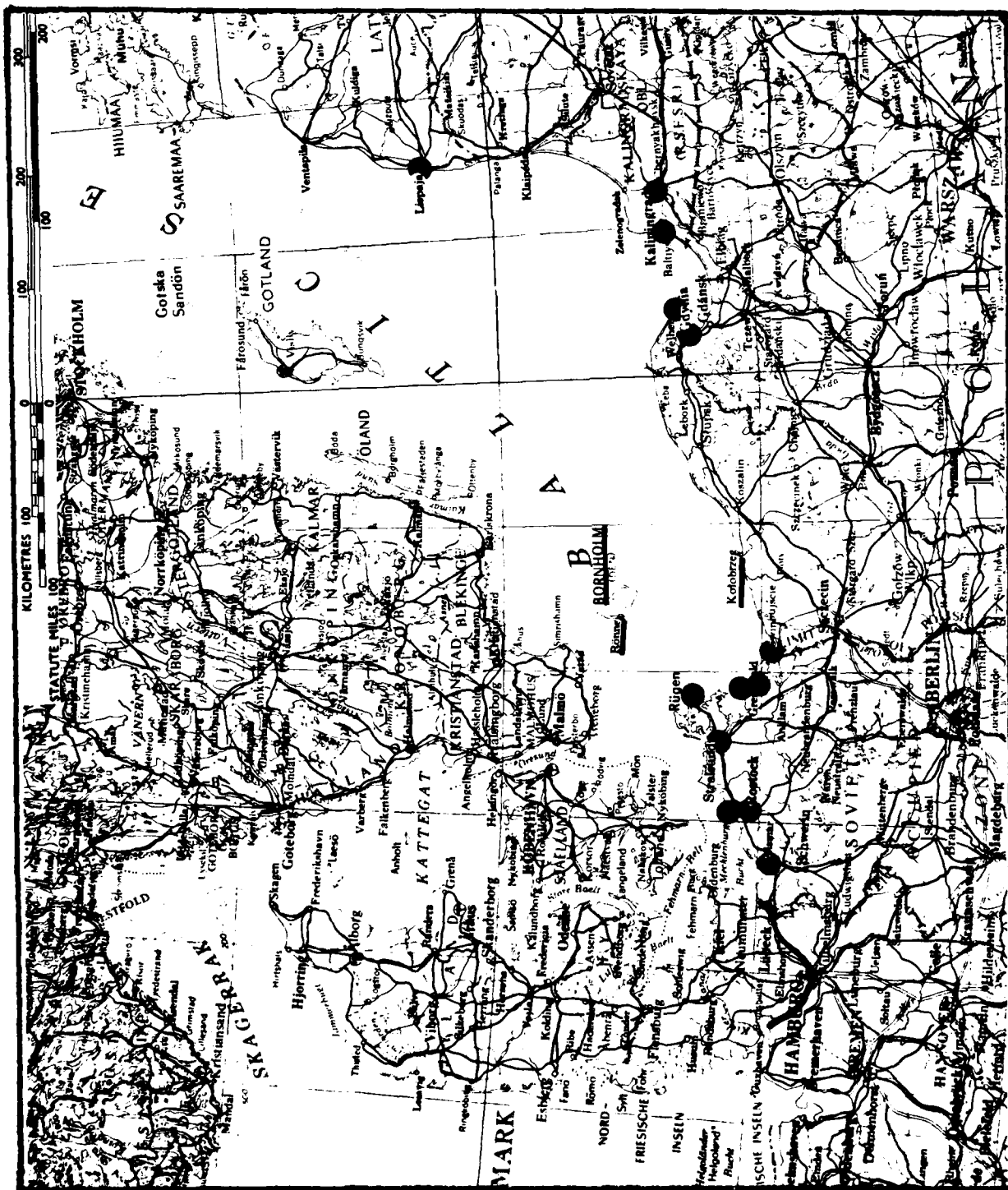


Figure 43. Political boundaries in 1945.

be verified during the final planning of the operation.

The railroads in FRG, Austria, northern Italy, Czechoslovakia, and Poland are necessary to move the supply tonnages required to support the ground operations (see Chapter VI), and to operate the captured airfields for US Tactical Air. Consequently, the rail networks in the five countries were surveyed.⁴

All five have a common gage railway system of 4 ft.-8½ inches. However, the electrification systems do not necessarily match. Polish, Czechoslovakian, and some Italian equipment is compatible, while Austrian equipment is mostly matched to German items.

The critical rail networks are in Austria, Poland, and Czechoslovakia and are shown in Figures 17 and 18. The military rail capacity from Trieste to Wien and from FRG to Wien has been calculated at 35 KT per day. This compares to 138 KT per day as the average daily capacity in 1976 of the complete Austrian railway system. The similar capacity values for Poland are 1106 KT per day and for Czechoslovakia 560 KT per day. This gives an indication why the European railroads have played such a vital military role during the World Wars and are likely to do so in any future conflict.

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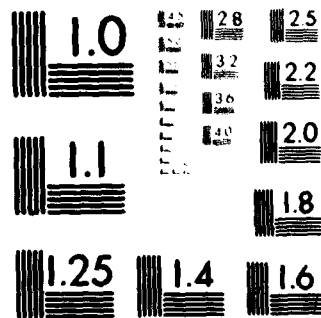
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

APPENDIX 2

FOOTNOTES

1. John Riethmuller, ed., Ports of the World, p. 346.
2. A. H. Kok, ed., Hans Gade's European Harbor Pilot, pp. 807-811.
3. US Army War College, Weapons Systems Handbook Academic Year 1980, pp. 3-50.
4. Paul Goldsack, ed., Jane's World Railways 1974-75, pp. 148, 164, 170, 284, 309, 351, 394.

APPENDIX 3

THE PACT GROUND FORCES

The 1983 Pact forces used for this study were derived from DIPP Volumes 4A and 4C, a classified DIA document. This reference should be used whenever possible. However, the Pact data contained in IISS document, The Military Balance 1979-1980¹, is unclassified, sufficiently accurate and is consequently quoted here for ready reference. The data in Table 39 includes the forces that should be considered when planning the campaign. The list does not include the 18 divisions belonging to Bulgaria and Rumania, who are not expected to participate in Central Europe. As a rule of thumb, about 2/3 of the Soviet divisions from the European USSR should be considered available for combat in the central Europe between the third and eighth days (D + 3 to D + 8). This translates to a possible total of 85 divisions in East Germany (26 in GDR + 15 from Poland and 44 from eastern USSR). Should all the divisions from eastern USSR military district be deployed, the maximum total would be 109 (including the Polish airborne and amphibious divisions).

The data in Table 39 is for the 1979 period. However, the Soviet Union and the Pact forces should remain through 1983 at the force levels indicated. The major changes to be expected by 1983 (unless the Pact and USSR mobilize) will be a gradual upgrading of equipment, increase of tanks in tank and motorized rifle divisions (up to 5 per platoon) addition of larger quantities of self propelled artillery, and minor organizational changes.

TABLE 99. PACT FORCES IN 1979

Central and Eastern Europe *	Tank Divisions	AFV	TOTAL
East Germany (GDR)			
Soviet Forces	10	10	20
East German forces	2	4	6
Poland **			
Soviet forces	2	-	2
Polish forces	5	8	13
Hungary			
Soviet forces	2	2	4
Hungarian forces	1	5	6
Czechoslovakia			
Soviet forces	2	3	5
Czechoslovakian forces	5	5	10
European USSR			
(Baltic, Byelorussian, Carpathian, Kiev, Leningrad, Moscow and Odessa Military Districts)	23	43	66
Central USSR			
(Volga and Ural Military Districts)	1	5	6
Southern USSR			
(North Caucasus, Trans-Caucasus and Turkistan Military Districts)	1	23	24
Sino-Soviet Border			
(Central Asian, Transbaikal, and Far East Military Districts)	6	40	46
	60	148	208

Note: 1. All 31 Soviet Divisions stationed in central and eastern Europe are Category 1 divisions.
 2. About half the divisions in European USSR are category 1 and 2. Divisions in central and southern USSR are likely to be category 3.

* Not shown are 8 MR divisions of Bulgaria and 10 divisions of Rumania, including 2 tank.
 ** In addition Poland has one Abn division and one amphibious assault division.

APPENDIX 3

FOOTNOTES

1. The International Institute for Strategic Studies, The Military Balance, 1979-1980, pp. 9-16.

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